13	Map	location			j	-		17 (17p)					- 1	(d) (1) / L			:							18	(18q11.2			
12	_	(pValue) following a BLASTX	6.10E-68	-				4.00E-160					4 007	4.00E-160					1	9.406-58			,	0.00E+00				
11	Name of protein identified following a	BLASTX analysis of the CuraGen sequence	Human Gene Similar to SWISSPROT-	ID:P55060 CELLULAR APOPTOSIS	SUSCEPTIBILITY PROTEIN - HOMO	לאר ובועס (ווסוגוטיוי), אין ממי		Human Gene SWISSPROT-		CHAIN (EC 3.6.1.37)	(SODIUM/POTASSIUM-DEPENDENT	ATPASE) - HOMO SAPIENS	(HUMAN), 290 aa.	Human Gene SWISSPROI - ID:P14415 SODIUM/POTASSIUM-		CHAIN (EC 3.6.1.37)	(SODIUM/POTASSIUM-DEPENDENT	ATPASE) - HOMO SAPIENS	(HUMAN), 290 aa.	Human Gene Similar to SP I REMBL-		- HOMO SAPIENS (HUMAN), 126 aa.		cadherin Human Gene SWISSPROT-	ID:P19022 NEURAL-CADHERIN	PRECURSOR (N-CADHERIN) -	HOMO SAPIENS (FIGURALY), SOU SAS.	
10	Protein	classifica tion of CuraGen	apoptosi					ATPase	associal	D				ATPase_ associat	bed	3				ATPase	ed			cadherin			·	
6	Type of	change	SILENT-	NONCODING	•			SILENT-	NONCODING	,	-			SILENT- NONCODING						SILENT-				SILENT-	NONCODING	.·		•
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0.00E+00	2.00E-80	3.10E-59	0.00E+00	0.00E+00	0.00E+00
cadherin Human Gene SWISSPROT-ID:P19022 NEURAL-CADHERIN PRECURSOR (N-CADHERIN) -HOMO SAPIENS (HUMAN), 906 aa.	Human Gene Similar to SWISSPROT-ID:Q26534 CATHEPSIN LPRECURSOR (EC 3.4.22.15) (SMCL1) - SCHISTOSOMA MANSON! (BLOOD FLUKE), 319 aa.	Human Gene Similar to SWISSNEW- ID:015247 CHLORIDE INTRACELLULAR CHANNEL PROTEIN 2 (XAP121) - HOMO SAPIENS (HUMAN), 243 aa. pcls:SWISSPROT-ID:015247 CHLORIDE INTRACELLULAR CHANNEL PROTEIN 2 (XAP121) - HOMO SAPIENS (HUMAN), 243 aa.	Human Gene SWISSPROT- ID:Q99715 COLLAGEN ALPHA 1(XII) CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 3063 aa. pcls:SPTREMBL-ID:Q99715 COLLAGEN TYPE XII ALPHA-1 PRECURSOR - HOMO SAPIENS (HUMAN), 3063 aa.	complem Human Gene SWISSPROT- ent ID:P10643 COMPLEMENT COMPONENT C7 PRECURSOR - HOMO SAPIENS (HUMAN), 843 aa.	complem Human Gene SWISSPROT- ID:P10643 COMPLEMENT COMPONENT C7 PRECURSOR - HOMO SAPIENS (HUMAN), 843 aa.
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7 cg43988460	8 cg43982945	cg43266931	10 cg43321451	11 cg43933757	12 cg43933757
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complem Human Gene SWISSPROT- ID:P10643 COMPLEMENT COMPONENT C7 PRECURSOR - HOMO SAPIENS (HUMAN), 843 aa.	complem Human Gene SWISSPROT. ID:P02748 COMPLEMENT COMPONENT C9 PRECURSOR - HOMO SAPIENS (HUMAN), 559 aa.	complem Human Gene SWISSPROT- ent ID:P02748 COMPLEMENT COMPONENT C9 PRECURSOR - HOMO SAPIENS (HUMAN), 559 aa.	complem Human Gene Homologous to SWISSPROT-ID:Q07021 COMPLEMENT COMPONENT 1, Q SUBCOMPONENT BINDING PROTEIN PRECURSOR (GLYCOPROTEIN GC1QBP) (GC1Q- R PROTEIN) (HYALURONAN- BINDING PROTEIN 1) (PRE-MRNA SPLICING FACTOR SF2, P32 SUBUNIT) - HOMO SAPIENS (HUMAN), 282 aa.
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13 cg43933757	14 cg42185571	15 cg42185571	16 cg43947909
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Human Gene SWISSNEW-ID:Q07973 CYTOCHROME P450-CC24 MITOCHONDRIAL PRECURSOR (EC 1.14) (P450- CC24) (VITAMIN D(3) 24-HYDROXYLASE) (1,25- DIHYDROXYLASE) (24-OHASE) - HOMO SAPIENS (HUMAN), 513 aa. pcls:SWISSPROT-ID:Q07973 CYTOCHROME P450-CC24 MITOCHONDRIAL PRECURSOR (EC 1.14) (P450- CC24) (VITAMIN D(3) 24-HYDROXYLASE) (1,25- DIHYDROXYLASE) (1,25- HYDROXYLASE) (24-OHASE) - HYDROXYLASE) (24-OHASE) - HOMO SAPIENS (HUMAN), 513 aa.	Human Gene SWISSNEW-ID:P04798 CYTOCHROME P450 1A1 (EC 1.14.14.1) (CYPIA1) (P450-P1) (P450 FORM 6) (P450-C) - HOMO SAPIENS (HUMAN), 512 aa. pcls:SWISSPROT- ID:P04798 CYTOCHROME P450 IA1 (EC 1.14.14.1) (P450-P1) (P450 FORM 6) (P450-C) (TCDD- INDUCIBLE) - HOMO SAPIENS (HUMAN), 512 aa.	Human Gene Homologous to SPTREMBL-ID:Q27524 CYTOCHROME C OXIDASE POLYPEPTIDE II (EC 1.9.3.1) - CAENORHABDITIS ELEGANS, 1647 aa (fragment).	Human Gene Homologous to SPTREMBL-ID:Q27524 CYTOCHROME C OXIDASE POLYPEPTIDE II (EC 1.9.3.1) - CAENORHABDITIS ELEGANS, 1647 aa (fragment).
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2860 GTGTGTGTGTCT GTGTGTGTGTGT C[C/G]GTGTGTGT TGTGTGTGGGTT CTAATG	1746 AGCAGGCTGGC CTATGTGGTCTA AG[A/G]TTCAGC CTGAAACTCATA GACACTG	376 A Q C	383
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17 cg43143315	18 cg43327428	19 cg32296860	20 cg32296860
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6.6E-124	6.60E-124	6.60E-124	8.60E-240	8.60E-240	1.30E-190
9.9	9.90	6.60	8.60	8.60	1.30
Human Gene Homologous to SPTREMBL-ID:Q27524 CYTOCHROME C OXIDASE POLYPEPTIDE II (EC 1.9.3.1) - CAENORHABDITIS ELEGANS, 1647 aa (fragment).	Human Gene Homologous to SPTREMBL-ID:Q27524 CYTOCHROME C OXIDASE POLYPEPTIDE II (EC 1.9.3.1) - CAENORHABDITIS ELEGANS, 1647 aa (fragment).	Human Gene Homologous to SPTREMBL-ID:Q27524 CYTOCHROME C OXIDASE POLYPEPTIDE II (EC 1.9.3.1) - CAENORHABDITIS ELEGANS, 1647 aa (fragment).	dehydrog Human Gene TREMBLNEW- enase ID:G806944 UDP-GLUCOSE DEHYDROGENASE, UDPGDH=52 KDA SUBUNIT {EC 1.1.1.22} - BOS TAURUS, 468 aa.	dehydrog Human Gene TREMBLNEW- enase ID:G806944 UDP-GLUCOSE DEHYDROGENASE, UDPGDH=52 KDA SUBUNIT {EC 1.1.1.22} - BOS TAURUS, 468 aa.	dehydrog Human Gene SWISSPROT- enase ID:P50213 ISOCITRATE DEHYDROGENASE (NAD), MITOCHONDRIAL SUBUNIT ALPHA PRECURSOR (EC 1.1.1.41) (ISOCITRIC DEHYDROGENASE) (NAD+-SPECIFIC ICDH) - HOMO SAPIENS (HUMAN), 366 aa.
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385 GGGAGGCCGAG GCGGGTGGATC ACC[C/gap]GAGG TCAGGAGTTCGA GACCAGCCT	CGGGTGGATCA CCCGAGGTCAG GAG[T/A]TCGAG ACCAGCCTGGC CAACATGGT	439 CAACATGGTGAA ACCCTGTCTCTA C[T/C]AAAAATAC AAAAATTAGCTG GGTGC	199 GGGGCGCGGGGT GGAGAAGCTGC GGC[A/G]GCGCG GCCCGTAGGAA GGTGCTGTC	236 AGGAAGGTGCT GTCCGAACGATC GG[G/A]ATAGGA GCGGTCCCTGC GCTTGCTG	130 GAACCCAAGAG CCACTGATAACT GG[C/gap]ACAAT CCAATGAAACAG AGGAAGCA
385	397	439	199	236	130
21 cg32296860	22 cg32296860	23 cg32296860	24 cg43264442	25 cg43264442	26 cg43998926
21	22	23	24	. 52	26

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1.30E-190	1.90E-137	0.00E+00	5.10E-224	5.10E-224	1.09-312	1.0e-312
dehydrog Human Gene SWISSPROT- enase ID:P50213 ISOCITRATE DEHYDROGENASE (NAD), MITOCHONDRIAL SUBUNIT ALPHA PRECURSOR (EC 1.1.1.41) (ISOCITRIC DEHYDROGENASE) (NAD+-SPECIFIC ICDH) - HOMO SAPIENS (HUMAN), 366 aa.	dehydrog Human Gene Homologous to SWISSPROT-ID:P13707 GLYCEROL- 3-PHOSPHATE DEHYDROGENASE (NAD+), CYTOPLASMIC (EC 1.1.1.8) (GPD-C) (GPDH-C) - MUS MUSCULUS (MOUSE), 348 aa.	Human Gene SWISSPROT- ID:P38935 DNA-BINDING PROTEIN SMUBP-2 (GLIAL FACTOR-1) (GF-1) - HOMO SAPIENS (HUMAN), 993 aa.	Human Gene TREMBLNEW- ID:G2058493 TELOMERIC REPEAT DNA-BINDING PROTEIN - HOMO SAPIENS (HUMAN), 419 aa.	Human Gene TREMBLNEW- ID:G2058493 TELOMERIC REPEAT DNA-BINDING PROTEIN - HOMO SAPIENS (HUMAN), 419 aa.	Human Gene SWISSPROT- ID:Q63100 DYNEIN INTERMEDIATE CHAIN 1, CYTOSOLIC (DH IC-1) - RATTUS NORVEGICUS (RAT), 643 aa.	Human Gene SWISSPROT- ID:Q63100 DYNEIN INTERMEDIATE CHAIN 1, CYTOSOLIC (DH IC-1) - RATTUS NORVEGICUS (RAT), 643 aa.
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27 cg43998926	28 cg43941594	29 cg43962927	30 cg43991661	31 cg43991661	32 cg43310449	33 cg43310449

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	15 (15q15)	4 (Xq26)				
3.2E-99	9.30E-106	1.70E-103	1.40E-197	1.40E-197	1.40E-197	1.40E-197
Human Gene Similar to SPTREMBL- ID:P70665 SIALIC ACID-SPECIFIC 9- O-ACETYLESTERASE - MUS MUSCULUS (MOUSE), 541 aa.	Human Gene Homologous to SWISSPROT-ID:P21781 KERATINOCYTE GROWTH FACTOR PRECURSOR (KGF) (FIBROBLAST GROWTH FACTOR- 7) (FGF-7) (HBGF-7) - HOMO SAPIENS (HUMAN), 194 aa.	Human Gene Homologous to SPTREMBL-ID:P78443 21 KD BASIC FIBROBLAST GROWTH FACTOR (BFGF) - HOMO SAPIENS (HUMAN), 196 aa.	glycoprot Human Gene SPTREMBL-ID:Q14245 ein ERYTHROID MEMBRANE PROTEIN 4.1 - HOMO SAPIENS (HUMAN), 641 aa.	glycoprot Human Gene SPTREMBL-ID:Q14245 ein ERYTHROID MEMBRANE PROTEIN 4.1 - HOMO SAPIENS (HUMAN), 641 aa.	glycoprot Human Gene SPTREMBL-ID:Q14245 ein ERYTHROID MEMBRANE PROTEIN 4.1 - HOMO SAPIENS (HUMAN), 641 aa.	Human Gene SPTREMBL-ID:Q14245 ERYTHROID MEMBRANE PROTEIN 4.1 - HOMO SAPIENS (HUMAN), 641 aa.
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1227 TCAATGAGGCTT TCTATTAATTTCC [T/CJTTAAAAGCA ATGGTTATTATT GAAA	2516 GGCCCTGAATGT TATGAAGGTTTG A[G/A]GTCAGCC TACAGATAACAG GATTAT	CAGTGGCTCAC GCCTATAATCCC AG[C/A]ACTTTGG GAGGCCAAGGC AGGAGGA	222 CAGCTGAAGGA GATAATTGGTGT GA[A/G]CAGAAG CTGAAAGCTTCT AATGGAG	237 ATTGGTGTGAAAC AGAAGCTGAAAG C[T/A]TCTAATGG AGACACTCCTAC ACATG	246 AACAGAAGCTGA AAGCTTCTAATG G[A/G]GACACTC CTACACATGAAG ACTTGA	255 TGAAAGCTTCTA ATGGAGACACTC C[T/A]ACACATGA AGACTTGACCAA GAACA
1227	2516	2973	222	237	246	255
34 cg43984524	35 cg43248101	36 cg43974968	37 cg43074195	38 cg43074195	39 cg43074195	40 cg43074195
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46	2.9E-150	2.9E-150	2.9E-150	2.9E-150	2.9E-150	2.9E-150	1.7
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Human Gene SWISSPROT- ID:Q01685 TRAM PROTEIN (TRANSLOCATING CHAIN- ASSOCIATING MEMBRANE PROTEIN) - CANIS FAMILIARIS (DOG), 373 aa.	glycoprot Human Gene Homologous to SWISSPROT-ID:P51674 MEMBRANE GLYCOPROTEIN M6-A - HOMO SAPIENS (HUMAN), 278 aa.	glycoprot Human Gene Homologous to SWISSPROT-ID:P51674 MEMBRANE GLYCOPROTEIN M6-A - HOMO SAPIENS (HUMAN), 278 aa.	glycoprot Human Gene Homologous to SWISSPROT-ID:P51674 MEMBRANE GLYCOPROTEIN M6-A - HOMO SAPIENS (HUMAN), 278 aa.	glycoprot Human Gene Homologous to SWISSPROT-ID:P51674 MEMBRANE GLYCOPROTEIN M6-A - HOMO SAPIENS (HUMAN), 278 aa.	glycoprot Human Gene Homologous to SWISSPROT-ID:P51674 MEMBRANE GLYCOPROTEIN M6-A - HOMO SAPIENS (HUMAN), 278 aa.	glycoprot Human Gene Homologous to SWISSPROT-ID:P51674 MEMBRANE GLYCOPROTEIN M6-A - HOMO SAPIENS (HUMAN), 278 aa.	glycoprot Human Gene Similar to SWISSPROT- ein ID:P52166 MEMBRANE PROTEIN SEL-12 - CAENORHABDITIS ELEGANS, 461 aa.
SWISS AM PI TING A MEN	Homol D:P5 EIN M	Homol D:P5 EIN M	Homol D:P5 EIN M	Homol D:P5 EIN M MAN)	Homol ID:P5 EIN M	Homol D:P5 EIN M	Simila MBR/ NORH 1 aa.
Human Gene S ID:Q01685 TRA (TRANSLOCAT ASSOCIATING PROTEIN) - CA (DOG), 373 aa.	ROT-I ROTE ROTE (HUI	ROT-I	ROT-I	sene F ROT-I PROTE S (HUI	ROT-I	ROT-I ROT-I ROTE 3 (HUI	Human Gene Simil ID:P52166 MEMBF SEL-12 - CAENOR ELEGANS, 461 aa.
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658 TAGCGATACAAA TATATATATAT [A/gap]TTTATCCA AAAATATGTTTTA TACA	AAGTTCTTGTAG TAGGTAGGGGG TA[C/T]TACTAGG GATATCTGTGGC ATGATT	TGTAGTAGGTAG GGGGTACTACTA G[G/C]GATATCT GTGGCATGATTA TGCATT	ATATCTGTGGCAT TGATTATGCATT C[C/gap]GTAGTA TTATTTAATTAAT TTGGGG	GTAGTATTATTA ATTAATTTGGGG[T/GJTCATTTTGCT TCCTTTTCTTTAT GC	AATTAATTTGGG GTTCATTTTGCT T[C/gap]CTTTTCT TTATGCTTAGAT TATCTT	ATTAATTTGGGG TTCATTTTGCTTC [C/gap]TTTTCTTT ATGCTTAGATTA	CCTAACCTCTG GTAACGGTAGTC C[T/C]GAGAGTT CGCAGTGTCAGT GAAATC
658	2457	2464 TGTAGTAGGTAG GGGGTACTACTA G[G/C]GATATCT GTGGCATGATTA TGCATT	2491	2517 (2529 /	2530 /	1150 CCTAACCTCTTG GTAACGGTAGTC C[T/C]GAGAGTT CGCAGTGTCAGT GAAATC
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41 cg43988092	42 cg43953517	43 cg43953517	44 cg43953517	45 cg43953517	46 cg43953517	47 cg43953517	48 cg43290087
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4.3E-92	2.2E-72	2.6E-60	8.7E-67
glycoprot Human Gene Similar to SWISSNEW- ID:Q13361 MICROFIBRIL- ASSOCIATED GLYCOPROTEIN 2 PRECURSOR (MAGP-2) (MP25) - HOMO SAPIENS (HUMAN), 173 aa. pcls:SWISSPROT-ID:Q13361 MICROFIBRIL-ASSOCIATED GLYCOPROTEIN 2 PRECURSOR (MAGP-2) - HOMO SAPIENS (HUMAN), 173 aa.	glycoprot Human Gene Similar to SPTREMBL-ID:004711 P-GLYCOPROTEIN-2 - ARABIDOPSIS THALIANA (MOUSE-EAR CRESS), 1233 aa.	glycoprot Human Gene Similar to SPTREMBL- ein ID:Q14245 ERYTHROID MEMBRANE PROTEIN 4.1 - HOMO SAPIENS (HUMAN), 641 aa.	Human Gene Similar to SWISSNEW- ID:O70133 ATP-DEPENDENT RNA HELICASE A (NUCLEAR DNA HELICASE II) (NDH II) (DEAD BOX HELICASE II) (MHEL-5) - MUS MUSCULUS (MOUSE), 1380 aa. pcls:TREMBLNEW-ID:G2961456 RNA HELICASE A - MUS MUSCULUS (MOUSE), 1380 aa.
glycoprot	glycoprot ein	glycoprot ein	helicase
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913 AGTAGAGAGTAGA GGGTAAAAGCT GG[A/G]CATTGC AAAAGGATTGGT TTAAGAA	884 GTTATTGAAAA ATACCTATTTTT [T/gap]CCAAAGT GTGTAAAAGATT GTTTG	212 TTCATGTGCAAG CTAAGTTATTCC T[C/A]TGGTCAAT CCTCTCCATCTT CTGGT	1782 CCTTGTTCCCAC TCTCCTTCATAT C[C/T]AAGTCATC AAACATCTGAAT GAGAG
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Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q16666 IFI16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).		
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interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELC DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) HOMO SAPIENS (HUMAN), 729 aa.pcls:SPTREMBL-ID:Q16666 IFI16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).	interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q16666 IFI16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).	interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q1666 IFI6=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).
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interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERF INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE DIFFERENTIATION TRANSCRIPTIONAL ACTIV HOMO SAPIENS (HUMAN), aa. pcls:SPTREMBL-ID:Q16 IFI16=INTERFERON-INDUC MYELOID DIFFERENTIATIC TRANSCRIPTIONAL ACTIV HOMO SAPIENS (HUMAN), (fragment).	interferon Human Gene SWISSPROT ID:Q16666 GAMMA-INTER INDUCIBLE PROTEIN IFI-1 (INTERFERON-INDUCIBLE DIFFERENTIATION TRANSCRIPTIONAL ACTIV HOMO SAPIENS (HUMAN) aa. pcls:SPTREMBL-ID:Q1(IFI16=INTERFERON-INDUMYELOID DIFFERENTIATI TRANSCRIPTIONAL ACTIV HOMO SAPIENS (HUMAN) (fragment).	interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTER- INDUCIBLE PROTEIN IFI-1 (INTERFERON-INDUCIBLE DIFFERENTIATION TRANSCRIPTIONAL ACTIV HOMO SAPIENS (HUMAN) aa. pcls:SPTREMBL-ID:Q16 IFI16=INTERFERON-INDUC MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIV HOMO SAPIENS (HUMAN) (fragment).
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21 (21q22.1)	21 (21q22.1)	21 (21922.1	2 (2q14.2)	2(2q14.2)
3.9E-281	3.9E-281	3.9E-281 (8.8E-94	8.8E-94
interferon Human Gene SWISSPROT- ID:P48551 INTERFERON- ALPHA/BETA RECEPTOR BETA CHAIN PRECURSOR (IFN-ALPHA- REC) (TYPE I INTERFERON RECEPTOR) (IFN-R) (INTERFERON ALPHA/BETA RECEPTOR- 2) - HOMO SAPIENS (HUMAN), 515 aa.	interferon Human Gene SWISSPROT- ID:P48551 INTERFERON- ALPHA/BETA RECEPTOR BETA CHAIN PRECURSOR (IFN-ALPHA- REC) (TYPE I INTERFERON RECEPTOR) (IFN-R) (INTERFERON ALPHA/BETA RECEPTOR- 2) - HOMO SAPIENS (HUMAN), 515 aa.	interferon Human Gene SWISSPROT- ID:P48551 INTERFERON- ALPHA/BETA RECEPTOR BETA CHAIN PRECURSOR (IFN-ALPHA- REC) (TYPE I INTERFERON RECEPTOR) (IFN-R) (INTERFERON ALPHA/BETA RECEPTOR- 2) - HOMO SAPIENS (HUMAN), 515 aa.	Human Gene Similar to SWISSPROT-ID:P18510 INTERLEUKIN-1 RECEPTOR ANTAGONIST PROTEIN PRECURSOR (IL-1RA) (ICIL- 1RA) (IRAP) - HOMO SAPIENS (HUMAN), 177 aa.	interleuki Human Gene Similar to SWISSPROT- nrecept ID:P18510 INTERLEUKIN-1 RECEPTOR ANTAGONIST PROTEIN PRECURSOR (IL-1RA) (ICIL- 1RA) (IRAP) - HOMO SAPIENS (HUMAN), 177 aa.
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2434 ATTTTAGTAGA GACAAGGTTTG C[C/T]ATGTTGGC CAGGCTGGTCT CGAACT	2441 GTAGAGACAAG GTTTTGCCATGT TG[G/C]CCAGGC TGGTCTCGAACT CCTGACC	2454 TTTGCCATGTTG GCCAGGCTGGT CT[C/T]GAACTCC TGACCTCAAGCG ATCCGC	694 GAAGGGCTCTC CTTCACGGGGA CTG[A/gap]AAAA AAAAAATCATGA AATCCTAAT	704 CCTTCACGGGG ACTGAAAAAAA AA[A'gap]TCATG AAATCCTAATTTT CATTTTC
2434	2441	2454	694	704
59 cg42489232	60 cg42489232	61 cg42489232	62 cg43926168	63 cg43926168
29	09	9	62	8

61					
0	1.3E-307	2.7E-282	1.7E-234	1.70E-234	1.70E-234
Human Gene TREMBLNEW- ID:G300258 MYOTONIC DYSTROPHY KINASE, DM-KINASE {C-TERMINAL, ALTERNATIVELY SPLICED, CLONE DELTA II} - HOMO SAPIENS, 616 aa.	Human Gene TREMBLNEW- ID:D1023392 INOSITOL 1,4,5- TRISPHOSPHATE 3-KINASE ISOENZYME (EC 2.7.1.127) - HOMO SAPIENS (HUMAN), 604 aa (fragment).	Human Gene SWISSPROT. ID:Q00537 SERINE/THREONINE. PROTEIN KINASE PCTAIRE-2 (EC 2.7.1) - HOMO SAPIENS (HUMAN), 523 aa.	Human Gene SPTREMBL-ID:Q61399 CYCLIN-DEPENDENT PROTEIN KINASE - MUS MUSCULUS (MOUSE), 783 aa.	Human Gene SPTREMBL-ID:Q61399 CYCLIN-DEPENDENT PROTEIN KINASE - MUS MUSCULUS (MOUSE), 783 aa.	Human Gene SPTREMBL-ID:Q61399 CYCLIN-DEPENDENT PROTEIN KINASE - MUS MUSCULUS (MOUSE), 783 aa.
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2889 AGCCGGGAATG CTGCTGCTGCTG CT[G/A]CTGCTG CTGCTGCTGCTG GGGGGAT	1043 AGGGCAGCCCC TCAGAAGCCTTC CC[G/A]GCAGAT CCGGGGGACCCC	TTTTCATCCTAT CAATTGAATGTG[G/CJCTTGAAAAA TCCAGCAAGAG CGGGG	2164 CTACTAAAATA CAAAAAATTAGC C[G/A]GGCGTGG TGGCGCATGCC	ATTAG STGGT SATGC CCCAG	2179 AAAATTAGCCGG GCGTGGTGGCG CA[T/C]GCCTGTA GTCCCAGCTACT CGGGAG
2889	1043	2227	2164	2175	2179
64 cg43336163	65 cg43987164	66 cg43119489	67 cg43957170	68 cg43957170	69 cg43957170
64	65	99	29	89	69

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2.80E-216	2.80E-216	1.80E-196	6.10E-189
Human Gene SWISSNEW-ID:070172 PHOSPHATIDYLINOSITOL-4- PHOSPHATE 5-KINASE TYPE II ALPHA (EC 2.7.1.68) (PIP5KII- ALPHA) (1- PHOSPHATIDYLINOSITOL-4- PHOSPHATE KINASE) (PTDINS(4)P- 5-KINASE B ISOFORM) (DIPHOSPHOINOSITIDE KINASE) - MUS MUSCULUS (MOUSE), 405 aa.	Human Gene SWISSNEW-ID:070172 PHOSPHATIDYLINOSITOL-4- PHOSPHATE 5-KINASE TYPE II ALPHA (EC 2.7.1.68) (PIP5KII- ALPHA) (1- PHOSPHATIDYLINOSITOL-4- PHOSPHATIDYLINOSITOL-4- PHOSPHATE KINASE) (PTDINS(4)P- 5-KINASE B ISOFORM) (DIPHOSPHOINOSITIDE KINASE) - MUS MUSCULUS (MOUSE), 405 aa.	Human Gene SPTREMBL-ID:Q92961 MAP KINASE KINASE MEK5B - HOMO SAPIENS (HUMAN), 448 aa.	Human Gene SWISSPROT- ID:Q00532 SERINE/THREONINE- PROTEIN KINASE KKIALRE (EC 2.7.1) - HOMO SAPIENS (HUMAN), 358 aa.
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1767 ACTTTGTGTATA TGTGTGTGTGTG T[G/gap]TGTTGG GGGGGGGTGAG TGTGTGCG	TTTGTGTATATG TGTGTGTGTGTGTGTGGGGGGGGGGG	123 AGTGGGCAGGG ACCTGGGAGC CTC[C/A]ATTCTC AATGCCCCACCC TTTACCT	1031 AAAGTTCTCGAA ATGCTTCATCCC C[G/A]ACAAAGC AAATTTCATGTC CGTCAG
1767	1769	123	1031
70 cg38438124	71 cg38438124	72 cg42923882	73 cg43948037
70	71	72	73

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6.10E-189	6.10E-189	6.10E-189	6.10E-189	3.00E-187	1.10E-164	3.60E-159
6.10	6.10	6.10	6.10	3.006	1.106	3.60
Human Gene SWISSPROT- ID:Q00532 SERINE/THREONINE- PROTEIN KINASE KKIALRE (EC 2.7.1) - HOMO SAPIENS (HUMAN), 358 aa.	Human Gene SWISSPROT- ID:Q00532 SERINE/THREONINE- PROTEIN KINASE KKIALRE (EC 2.7.1) - HOMO SAPIENS (HUMAN), 358 aa.	Human Gene SWISSPROT- ID:Q00532 SERINE/THREONINE- PROTEIN KINASE KKIALRE (EC 2.7.1) - HOMO SAPIENS (HUMAN), 358 aa.	Human Gene SWISSPROT-ID:Q00532 SERINE/THREONINE-PROTEIN KINASE KKIALRE (EC 2.7.1) - HOMO SAPIENS (HUMAN), 358 aa.	Human Gene SPTREMBL-ID:012792 PROTEIN TYROSINE KINASE - HOMO SAPIENS (HUMAN), 350 aa.	Human Gene SPTREMBL-ID:Q16205 MYOTONIN PROTEIN KINASE - HOMO SAPIENS (HUMAN), 625 aa.	Human Gene SWISSPROT- ID:P49615 CELL DIVISION PROTEIN KINASE 5 (EC 2.7.1) (TAU PROTEIN KINASE II CATALYTIC SUBUNIT) (TPKII CATALYTIC SUBUNIT) (KINASE PSSALRE) (CRK6) - MUS MUSCULUS (MOUSE), 292 aa.
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1106	1115	1124	1134	2409	5568	610
74 cg43948037	75 cg43948037	76 cg43948037	77 cg43948037	78 cg42703622	79 cg43336176	80 cg43982923
74	75	76	77	78	79	8

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5.50E-124	3.20E-89	0.00E+00	1.90E-304
Human Gene Homologous to SWISSNEW-ID:P54619 5'-AMP- ACTIVATED PROTEIN KINASE, GAMMA-1 SUBUNIT (AMPK GAMMA- 1 CHAIN) - HOMO SAPIENS (HUMAN), 331 aa. pcls:SWISSPROT- ID:P54619 5'-AMP-ACTIVATED PROTEIN KINASE, GAMMA-1 SUBUNIT (AMPK GAMMA CHAIN) - HOMO SAPIENS (HUMAN), 331 aa.	Human Gene Similar to SWISSPROT- ID:Q1519 [PYRUVATE DEHYDROGENASE(LIPOAMIDE)] KINASE ISOZYME 2 PRECURSOR (EC 2.7.1.99) (PYRUVATE DEHYDROGENASE KINASE ISOFORM 2) - HOMO SAPIENS (HUMAN), 407 aa. pcls:SPTREMBL- ID:Q15119 PYRUVATE DEHYDROGENASE KINASE - HOMO SAPIENS (HUMAN), 407 aa.	Human Gene SWISSNEW-ID:P04626 ERBB-2 RECEPTOR PROTEIN- TYROSINE KINASE PRECURSOR (EC 2.7.1.112) (P185ERBB2) (NEU PROTO-ONCOGENE) (C-ERBB-2) - HOMO SAPIENS (HUMAN), 1255 aa. pcls: SWISSPROT-ID:P04626 ERBB-2 RECEPTOR PROTEIN- TYROSINE KINASE PRECURSOR (EC 2.7.1.112) - HOMO SAPIENS (HUMAN), 1255 aa.	Human Gene SWISSPROT- ID:Q07866 KINESIN LIGHT CHAIN (KLC) - HOMO SAPIENS (HUMAN), 569 aa.
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688 ACATTCAAGCTC	CGCTGCCCGCG CGGGGACCACA ACC[A/C]AAGTC GCGGCCGCCGC AGCCATGCG	4772 CACCACGATGC GGACCCCACTG CCGG/AJGCTCG ACCTCCTCGGG ACGGGGCGC	300 TCGGCGCACAG TCGCTGCTCCG CGC[G/T]CGCGC CCGGCGGCGCT
889	77	4772	300
81 cg43265203	82 cg43966625	83 cg44004317	84 cg43925424
8	8	88	84

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E-60	F-81	00+	-248
2.70E-60	3.50E-81	0.00E+00	9.40E-248
Human Gene Similar to SWISSPROT- ID:Q07866 KINESIN LIGHT CHAIN (KLC) - HOMO SAPIENS (HUMAN), 569 aa.	misc_cha Human Gene Similar to SPTREMBL- ID:P91197 SIMILAR TO LIGAND- GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.	Human Gene SWISSNEW-ID:Q61324 ARYL HYDROCARBON RECEPTOR NUCLEAR TRANSLOCATOR 2 (ARNT PROTEIN 2) - MUS MUSCULUS (MOUSE), 712 aa.	Human Gene SWISSNEW-ID:013451 51 KD FK506-BINDING PROTEIN (FKBP51) (PEPTIDYL-PROLYL CIS-TRANS ISOMERASE) (EC 5.2.1.8) (PPIASE) (ROTAMASE) (54 KD PROGESTERONE RECEPTOR-ASSOCIATED IMMUNOPHILIN) (FKBP54) (P54) (F1 ANTIGEN) - HOMO SAPIENS (HUMAN), 457 aa. Ipcis:SWISSPROT-ID:013451 51 KD FK506-BINDING PROTEIN (FKBP51) (PEPTIDYL-PROLYL CIS-TRANS ISOMERASE) (EC 5.2.1.8) (PPIASE) (ROTAMASE) (54 KD PROGESTERONE RECEPTOR-ASSOCIATED IMMUNOPHILIN) (FKBP54) (P54) (F1 ANTIGEN) - HOMO SAPIENS (HUMAN), 457 aa.
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242 TAGAGGACCACA GGGTGCAGAGGGGGATGTGTCCTGGGGTCCTTCGGGGTCCTTCCT	2540 TTGAGCCTCCAG GCTTCTCCTTGA C[G/A]TCATTCCT CTCCTTCCTTGC TGCAA	2349 GAACTGCAGTCA/ TGCACAGCTGG CG[A/G]CCAGCC AAAGGCATTTA CTGAGCA	1358 AAGCTTAGTACT AAAAAGTCAAAA T[I/A]TTTTTGCA TGATAGAGGAGT GTAAA
242	2540	2349	1358
85 cg44002977	86 cg27803682	87 cg43971768	88 cg43987181
82	98	87	88

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ω		11 (11924)	22 (22q11.2 1)	22 (22q11.2 1)
4.70E-237	0.00E+00	4.70E-253	2.30E-205	2.30E-205
Human Gene SWISSPROT- ID:003181 PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR BETA (PPAR-BETA) (PPAR-DELTA) (NUCLEAR HORMONE RECEPTOR 1) (NUC1) (NUCI) - HOMO SAPIENS (HUMAN), 441 aa.	Human Gene SWISSNEW-ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE (EC 2.7.49); ENDONUCLEASE] - HOMO SAPIENS (HUMAN), 874 aa. pcls:SWISSPROT-ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE) - HOMO SAPIENS (HUMAN), 874 aa.	Human Gene SWISSPROT- ID:Q01543 FLI-1 ONCOGENE (ERGB TRANSCRIPTION FACTOR) - HOMO SAPIENS (HUMAN), 452 aa.	Human Gene SPTREMBL-ID:Q13746 BCR-ABL MRNA OF ACUTE LYMPHOCYTIC LEUKAEMIA (ALL) PATIENTS - HOMO SAPIENS (HUMAN), 386 aa.	Human Gene SPTREMBL-ID:Q13746 BCR-ABL MRNA OF ACUTE LYMPHOCYTIC LEUKAEMIA (ALL) PATIENTS - HOMO SAPIENS (HUMAN), 386 aa.
nucl_rec pt	nuclease	e e	e negoono	e e
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143 GCCGGGGACAGT GTTGTACAGTGT TT[7/C]GGGCAT GCACGTGATACT CACACAG	CGGTGATATTAC AAAACAATGAAT T[C/T]GGAACTAT TATAGATTGGGC ACCTC	GCACAGGGGAG TGAGGGCAGGG CGCIT/CJCGCAG GGGGCACGCAG GGAGGGCCC	3136 CATCATAGAACT CCTTGTGGATCT C(G/A)TAGAGCT CAGGCACTTTGA AGAAGA	3312 GACAGGACCCA // TTTCTCATCTC CA[A/G]GCCCTTT TCCAAGTCCAGC TCCAAGTCCAGC
<u>.</u>	3497	153	3136	3312
89 cg43263644	90 cg44131079	91 cg44031914	92 cg43932550	93 cg43932550
68	06	91	92	86

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1.90E-52	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-288
Human Gene Similar to SWISSPROT-ID:P24407 RAS-RELATED PROTEIN RAB-8 (ONCOGENE C-MEL) - HOMO SAPIENS (HUMAN), AND CANIS FAMILIARIS (DOG), 207 aa.	phosphat Human Gene SPTREMBL-ID:Q10728 ase SERINE/THREONINE PROTEIN PHOSPHATASE PP1 SMOOTH MUSCLE REGULATORY M110 SUBUNIT (110 KDA SUBUNIT) - RATTUS NORVEGICUS (RAT), 976 aa.	Human Gene SPTREMBL-ID:Q10728 SERINE/THREONINE PROTEIN PHOSPHATASE PP1 SMOOTH MUSCLE REGULATORY M110 SUBUNIT (110 KDA SUBUNIT) - RATTUS NORVEGICUS (RAT), 976 aa.	phosphat Human Gene SWISSPROT- ase ID:Q06190 PROTEIN PHOSPHATASE PP2A, 130 KD REGULATORY SUBUNIT (PR130) - HOMO SAPIENS (HUMAN), 1150 aa.	phosphat Human Gene SWISSPROT- ase ID:Q06190 PROTEIN PHOSPHATASE PP2A, 130 KD REGULATORY SUBUNIT (PR130) - HOMO SAPIENS (HUMAN), 1150 aa.	phosphat Human Gene SWISSNEW-ID:P30304 ase I. (EC 3.1.3.48) - HOMO SAPIENS (HUMAN), 523 aa. pcls:SWISSPROT-ID:P30304 M-PHASE INDUCER PHOSPHATASE 1 (EC 3.1.3.48) - HOMO SAPIENS (HUMAN), 523 aa.
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SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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598 ACGGAGAAAGG AGCAGCTGAAA GTG[G/A]CCTGG ACTCCAGCCCTG GCTGTTGT	1076 CGTCACTATGTA CTTGGTTTTGCG C[T/gap]TTTTTT CCTTAAAAAAA AAGGCC	763 CTTCATAAAACC AATCGAGAGAGAGAGAGAGAGAGAGATCCTGCTTAAAATCCTGCTTACAAAA	1786 ATTGTTTTCAAC ATGAAGTAAAGA A[T/A]AACGTTGA GGCCTTTACTAT TAGCT	1838 GTCTAATACTCC TGGGAGGAAGG AA[7/A]ATATCTA TCTAGTAAGAAT TTTAAT	2303 GAGCACCGTGT CAAGCTGCTCTG AG[C/T]CACAGT GGGATGAACCA GCCGGGGC
598	1076	763	1786	1838	2303
94 cg43967268	95 cg43920534	96 cg43920534	97 cg43926887	98 cg43926887	99 cg43088901
94	36	96	97	86	66

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6.00E-81	3.90E-59	4.00E-57	6.70E-185	6.70E-185
phosphat Human Gene Similar to SWISSPROT- ase ID:P51452 DUAL SPECIFICITY PROTEIN PHOSPHATASE 3 (EC 3.1.3.48) (EC 3.1.3.16) (DUAL SPECIFICITY PROTEIN PHOSPHATASE VHR) - HOMO SAPIENS (HUMAN), 185 aa.	polymera Human Gene Similar to SPTREMBL-se ID:Q15370 RNA POLYMERASE II TRANSCRIPTION FACTOR SIII P18 SUBUNIT - HOMO SAPIENS (HUMAN), 118 aa.	polymera Human Gene Similar to SPTREMBL-se ID:Q15369 RNA POLYMERASE II ELONGATION FACTOR SIII, P15 SUBUNIT - HOMO SAPIENS (HUMAN), 112 aa.	potassiu Human Gene SWISSPROT- m_chann ID:P48544 G PROTEIN-ACTIVATED INWARD RECTIFIER POTASSIUM CHANNEL 4 (GIRK4) (POTASSIUM CHANNEL, INWARDLY RECTIFYING, SUBFAMILY J, MEMBER 5) (HEART KATP CHANNEL) (KATP-1) (CARDIAC INWARD RECTIFIER) (CIR) (KIR3.4) - HOMO SAPIENS (HUMAN), 419 aa.	potassiu Human Gene SWISSPROT- m_chann ID:P48544 G PROTEIN-ACTIVATED INWARD RECTIFIER POTASSIUM CHANNEL 4 (GIRK4) (POTASSIUM CHANNEL, INWARDLY RECTIFYING, SUBFAMILY J, MEMBER 5) (HEART KATP CHANNEL) (KATP-1) (CARDIAC INWARD RECTIFIER) (CIR) (KIR3.4) - HOMO SAPIENS (HUMAN), 419 aa.
phosphat ase	polymera se	polymera se	potassiu m_chann el	potassiu m_chann el
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3664 GTGAGCCATAAT OF TO A TGATGGCCAG CA (G/gap)GTGGC GCTGCCTTCCAC GCTGCTTCCAC CCATGGTG	TGGGGGAAATG GGCTCTTGGG GGT[C/gap]TCAC TGCACGGCTTGT TCATTGGCA	331 TACGAATTGGCA C TATTGTTTATT[C/gap]TCAGTTTG TGAAATGTCCT TAATT	4375 CGAGACCAGCC A TGGCCAACATG GTG[A/C]AACCC CATCTCTACTAA AAATACAA	4389 CCAACATGGTGA C AACCCCATCTCT A[C/T]TAAAAATA CAAAAATTAGCC GGGCG
3664	648	331	4375	4389
100 cg43920213	101 cg43969348	102 cg43966692	103 cg43265754	104 cg43265754
100	101	102	103	104

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41	6 (6pter)	20 (20p11.2)		22 (22q12.2)	11
-150	-124	00+	00+	-133	-123
7.70E-150	1.60E-124	0.00E+00	0.00E+00	5.40E-133	4.80E-123
Human Gene Homologous to SWISSPROT-ID:P36959 GMP REDUCTASE (EC 1.6.6.8) (GUANOSINE 5'-MONOPHOSPHATE OXIDOREDUCTASE) - HOMO SAPIENS (HUMAN), 345 aa.	Human Gene Homologous to SWISSPROT-ID:P16083 NAD(P)H DEHYDROGENASE (QUINONE) 2 (EC 1.6.99.2) (QUINONE REDUCTASE) (DT-DIAPHORASE) (AZOREDUCTASE) (PHYLLOQUINONE REDUCTASE) (MENADIONE REDUCTASE) - HOMO SAPIENS (HUMAN), 231 aa.	Human Gene SWISSPROT- ID:P07204 THROMBOMODULIN PRECURSOR (FETOMODULIN) (TM) (CD141 ANTIGEN) - HOMO SAPIENS (HUMAN), 575 aa.	Human Gene TREMBLNEW- ID:G2304981 MYOSIN VI - HOMO SAPIENS (HUMAN), 1262 aa.	Human Gene Homologous to SWISSPROT-ID:P26044 RADIXIN (MOESIN B) - SUS SCROFA (PIG), 583 aa.	Human Gene Homologous to SPTREMBL-ID:O00379 DELTA- CATENIN - HOMO SAPIENS (HUMAN), 792 aa.
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SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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538 ATGTTGTGTTGG (GTCCCCAGATTCCCCAGATTCCCCAGATTCCTTGCATCATTCAT	GTAAGCAGCACA CTAGGAGGCCC AG[G/gap]CGCAG GCAAAGAGAAA ATGGTGCTG	TGTATCÁTAGAA // ATGTAACTTTTG T[A/G]AGACAAA GGTTTTCCTCTT CTATT	779 GACACTAGGAAT TTCTTAAAAAGA A(A'gap]GATGTT GGAAGCAGAAC ACTTACTA	2306 CTCTGACCTGAG / TCTTTGATTTAAG (A/G)AGTATTTGT CTTCCTTGT CTTCCTTGTCTATTGT AATG	1006 GGACACCCTCG CGACCCTCGACAAACCCTCGAAAACGCTTCAGGAAAAACGCTTCAGGAAAAAACTATGAAGACATTGAAGACATTGAAGACACATTGAAGACACATTGAACACACATTGAACACACATTGAACACACAC
538	1020	4041	622	2306	1006
105 cg43922227	106 cg43927549	107 cg43957486	108 cg43973080	109 cg42914441	110 cg43942318
105	106	107	108	109	110

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1.80E-117	1.80E-117	1.80E-117	O.00E+00
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Human Gene Homologous to SPTREMBL-ID:P97756 CA2+/CALMODULIN-DEPENDENT PROTEIN KINASE IV KINASE ISOFORM - RATTUS NORVEGICUS (RAT), 505 aa.	Human Gene Homologous to SPTREMBL-ID:P97756 CA2+/CALMODULIN-DEPENDENT PROTEIN KINASE IV KINASE ISOFORM - RATTUS NORVEGICUS (RAT), 505 aa.	Human Gene Homologous to SPTREMBL-ID:P97756 CA2+/CALMODULIN-DEPENDENT PROTEIN KINASE IV KINASE ISOFORM - RATTUS NORVEGICUS (RAT), 505 aa.	synthase Human Gene SWISSPROT- ID:P35421 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE (EC 6.3.5.3) (FGAM SYNTHASE) (FORMYLGLYCINAMIDE RIBOTIDE AMIDOTRANSFERASE) (FGARAT) (ADENOSINE-2) (FGAMS) (FORMYLGLYCINAMIDE RIBOTIDE SYNTHETASE) - DROSOPHILA MELANOGASTER (FRUIT FLY), 1354 aa.
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431 CAGGCCAGGCC TGTGTGTCCACC TG[C/G]ACAGGC ATTCTCCTTGTT CCAGAAA	541 CGCAGCCCAA GTGTCAACAAGG GG[C/T]TCAATAA GGCTTTCTGGGA GCCACT	590 CTGGCAGCTGG TGGGATGGAAG GGG[G/gap]AGGT GGAAAAGGGCA GAAAAGGGCA	7268 AGGTCAGGAGTT TGAGACCAGCCT A[G/A]CCAACAT GGTGAAACCCC ATCTCTA
431	541	290	7268
111 cg43929933	112 cg43929933	113 cg43929933	114 cg43070037
111	. 112	113	414

0.00E+00	0.00E+00	0.00E+00
synthase Human Gene SWISSPROT- ID:P35421 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE (EC 6.3.5.3) (FGAM SYNTHASE) (FORMYLGLYCINAMIDE RIBOTIDE AMIDOTRANSFERASE) (FGARAT) (ADENOSINE-2) (FGAMS) (FORMYLGLYCINAMIDE RIBOTIDE SYNTHETASE) - DROSOPHILA MELANOGASTER (FRUIT FLY), 1354 aa.	synthase Human Gene SWISSPROT- ID:P35421 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE (EC 6.3.5.3) (FGAM SYNTHASE) (FORMYLGLYCINAMIDE RIBOTIDE AMIDOTRANSFERASE) (FGARAT) (ADENOSINE-2) (FGAMS) (FORMYLGLYCINAMIDE RIBOTIDE SYNTHETASE) - DROSOPHILA MELANOGASTER (FRUIT FLY), 1354 aa.	Human Gene SWISSPROT- ID:P35421 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE (EC 6.3.5.3) (FGAM SYNTHASE) (FORMYLGLYCINAMIDE RIBOTIDE AMIDOTRANSFERASE) (FGARAT) (ADENOSINE-2) (FGAMS) (FORMYLGLYCINAMIDE RIBOTIDE SYNTHETASE) - DROSOPHILA MELANOGASTER (FRUIT FLY), 1354 aa.
synthase	synthase	synthase
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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7269 GGTCAGGAGTT GAGACCAGCCT AG[C/G]CAACAT GGTGAAACCCC ATCTCTAC	7352 GTGGGTGCCTG TAATCCCAGCTA CT[C/T]GGGAGG CTGAGGCAGGA GAATCACC	7365 ATCCCAGCTACT CGGGAGGCTGA GG[C/T]AGGAGA ATCACCTGAACC TAGGAGG
7265	7352	7365
115 cg43070037	116 cg43070037	117 cg43070037

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0.00E+00	3.10E-59	2.20E-56	1.50E-254	3.50E-83
Human Gene SWISSPROT- ID:P35421 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE (EC 6.3.5.3) (FGAM SYNTHASE) (FORMYLGLYCINAMIDE RIBOTIDE AMIDOTRANSFERASE) (FGARAT) (ADENOSINE-2) (FGAMS) (FORMYLGLYCINAMIDE RIBOTIDE SYNTHETASE) - DROSOPHILA MELANOGASTER (FRUIT FLY), 1354 aa.	Human Gene Similar to SWISSPROT- ID:035696 ALPHA-2,8- SIALYLTRANSFERASE (EC 2.4.99) (ST8SIAII) (SIALYLTRANSFERASE X) (STX) (POLYSIALIC ACID SYNTHASE) - MUS MUSCULUS (MOUSE), 375 aa.	Human Gene Similar to SWISSNEW-ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.	Human Gene SWISSPROT- ID:P56159 GDNF RECEPTOR ALPHA PRECURSOR (GDNFR-ALPHA) (TGF- BETA RELATED NEUROTROPHIC FACTOR RECEPTOR 1) - HOMO SAPIENS (HUMAN), 464 aa.	Human Gene Similar to TREMBLNEW-ID:E307161 MITOCHONDRIAL VERY-LONG-CHAIN ACYL-COATHIOESTERASE - RATTUS NORVEGICUS (RAT), 453 aa.
synthase	synthase	synthase	or	thioester ase
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7366 TCCCAGCTACTC GGGAGGCTGAG GC[A/G]GGAGAA TCACCTGAACCT AGGAGGC	240 AGTACGCCAGC CCGGGGGGCGCC CCG[A/C]ATGTA CATGTTCCACGC GGGATTCC	17 NACGCGTTGGC GTCGT[T/C]CTC GTTGAGCTCATC AATCCACCAC	811 ACACAGCCCCA GTTTGCTTTACA GC[C/G]CAAGTT ACAAACTGTCCC TTTAAAA	TCTAGATATTTAA CTGACCCACTAT [A/gap]TTCCTCA AGGATACTGCAT TTGGAC
7366	240	17	811	312
118 cg43070037	119 cg43123664	120 cg21428405	121 cg43982633	122 cg43054268
81-	119	120	121	122

0	6 (6q14)	5 (5q13)	5 (5q13)	5 (5q13)	5 (5q13)	
		1				
3.50E-83	5.40E-252	4.40E-225	4.40E-225	4.40E-225	4.40E-225	2.50E-199
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Human Gene Similar to TREMBLNEW-ID:E307161 MITOCHONDRIAL VERY-LONG-CHAIN ACYL-COATHIOESTERASE - RATTUS NORVEGICUS (RAT), 453 aa.	Human Gene SWISSPROT- ID:P21554 CANNABINOID RECEPTOR 1 (CB1) (CB-R) (CANN6) HOMO SAPIENS (HUMAN), 472 aa.	Human Gene SWISSPROT. ID:P25116 THROMBIN RECEPTOR PRECURSOR - HOMO SAPIENS (HUMAN), 425 aa.	Human Gene SWISSPROT. ID:P25116 THROMBIN RECEPTOR PRECURSOR - HOMO SAPIENS (HUMAN), 425 aa.	Human Gene SWISSPROT. ID:P25116 THROMBIN RECEPTOR PRECURSOR - HOMO SAPIENS (HUMAN), 425 aa.	Human Gene SWISSPROT. ID:P25116 THROMBIN RECEPTOR PRECURSOR - HOMO SAPIENS (HUMAN), 425 aa.	Human Gene SWISSPROT- ID:P35348 ALPHA-1A ADRENERGIC RECEPTOR (ALPHA 1A- ADRENOCEPTOR) (ALPHA-1C ADRENERGIC RECEPTOR) - HOMO SAPIENS (HUMAN), 466 aa.
thioester ase	tm7	tm7	tm7	tm7	tm7	tm7
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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448 GACTATATGATC AAAGCCTTATAG C[A/gap]AAAAAA ATTTTTAATATT TGCAAA	259 TGAAGATTACCC CCACACCTGTGT G[A/G]CAAGTGA TCAAAAGGAAC AGGACC	3473 GGCAACAAAAG CGAAACTCCATC TC[A/gap]AAAAA AAAGAGCTATAG GATCTTTA	AAGCGAAACTCC ATCTCAAAAAA A[Agap]GAGCTA TAGGATCTTTAC AATATAT	4462 TCCTCTGTCTGC TGGCTGGCCGC GT[G/A]TATGAAG AGACTAATTGG ACACAG	4483 GCGTGTATGAAG AAGACTAATTGG A[C/T]ACAGAGC CGTGATGAATTA AAGTCT	1796 GCCTCCCGGGT TCAAGTGATTCT CC[T/C]GCCTCA GCCTCCCAGTA GCTGGGAT
448	259	3473	3481	4462	4483	1796
123 cg43054268	124 cg43943775	125 cg42886565	126 cg42886565	127 cg42886565	128 cg42886565	129 cg43307001
123	124	125	126	127	128	129

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2.50E-199	2.50E-199	2.80E-190	4.50E-121	4.50E-121	4.50E-121
Human Gene SWISSPROT- ID:P35348 ALPHA-1A ADRENERGIC RECEPTOR (ALPHA 1A- ADRENOCEPTOR) (ALPHA-1C ADRENGIC RECEPTOR) - HOMO SAPIENS (HUMAN), 466 aa.	Human Gene SWISSPROT- ID:P35348 ALPHA-1A ADRENERGIC RECEPTOR (ALPHA 1A- ADRENOCEPTOR) (ALPHA-1C ADRENERGIC RECEPTOR) - HOMO SAPIENS (HUMAN), 466 aa.	Human Gene SWISSPROT- ID:P21731 THROMBOXANE A2 RECEPTOR (TXA2-R) (PROSTANOID TP RECEPTOR) - HOMO SAPIENS (HUMAN), 369 aa.	Human Gene Homologous to SPTREMBL-ID:Q99732 TNF-ALPHA INDUCIBLE RESPONSIVE ELEMENT - HOMO SAPIENS (HUMAN), 228 aa.	Human Gene Homologous to SPTREMBL-ID:Q99732 TNF-ALPHA INDUCIBLE RESPONSIVE ELEMENT - HOMO SAPIENS (HUMAN), 228 aa.	Human Gene Homologous to SPTREMBL-ID:Q99732 TNF-ALPHA INDUCIBLE RESPONSIVE ELEMENT - HOMO SAPIENS (HUMAN), 228 aa.
tm7	tm7	tm7	tnf	tnf	tnf
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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1898 GGGGTTTCACCA TGTTGGCCAGG CT[G/A]GTCTCG AACTCCTGACCT CAAGTGA	1909 ATGTTGGCCAG GCTGGTCTCGAA CT[C/T]CTGACCT CAAGTGATCCGC CCACCT	GGTGGATCACCT SAGGTCACGAG TT[C/T]GAGACCA SCCTGACCAACA TGGAGA	TCCATTICTTTTT CTTTTTTTTTTT /gapjTAAGTGAGA CTACATTGGCAA ATGG	CCATTICTTTTC TTTTTTTTT[// gap]AAGTGAGAC TACATTGGCAAA TGGG	412 TTCCAAACATCA AATGAAGGGGG AT[C/gap]AATGG TTACCACTATCG TTTCAAC
1898	1909	2113 (891	892	412
130 cg43307001	131 cg43307001	132 cg43047341	133 cg43965652	134 cg43965652	135 cg43965652
130	131	132	133	134	135

16	4	17	17	17	5)	5)
					10 (10p15)	10 (10p15)
1.70E-51	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-255	2.40E-255
1.7	0.0	0.0	0.0	0.0	2.40	2.40
Human Gene Similar to SWISSPROT-ID:Q13829 TUMOR NECROSIS FACTOR, ALPHA-INDUCED PROTEIN 1, ENDOTHELIAL (B12 PROTEIN) - HOMO SAPIENS (HUMAN), 316 aa.	transcript Human Gene SWISSPROT- ID:Q02086 TRANSCRIPTION FACTOR SP2 (KIAA0048) - HOMO SAPIENS (HUMAN), 606 aa.	transcript Human Gene SWISSPROT- factor ID:Q02086 TRANSCRIPTION FACTOR SP2 (KIAA0048) - HOMO SAPIENS (HUMAN), 606 aa.	transcript Human Gene SWISSPROT- ID:Q02086 TRANSCRIPTION FACTOR SP2 (KIAA0048) - HOMO SAPIENS (HUMAN), 606 aa.	transcript Human Gene SWISSPROT- factor ID:Q02086 TRANSCRIPTION FACTOR SP2 (KIAA0048) - HOMO SAPIENS (HUMAN), 606 aa.	transcript Human Gene SWISSPROT- factor ID:P23771 TRANS-ACTING T-CELL SPECIFIC TRANSCRIPTION FACTOR GATA-3 - HOMO SAPIENS (HUMAN), 443 aa.	transcript Human Gene SWISSPROT- factor ID:P23771 TRANS-ACTING T-CELL SPECIFIC TRANSCRIPTION FACTOR GATA-3 - HOMO SAPIENS (HUMAN), 443 aa.
ţţ	transcript factor	transcript factor	transcript factor	transcript factor	transcript factor	transcript factor
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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933 AGCTCACTTTGG CCCTTCTCCACC C[A/G]TCCCAAC CCCATTGCTAAC AACATG	1118 GCCACAGGGCT CCTTTCCACCAG GG[G/gap]CCCA GGGAGGACACA GGTGGGGGGAC	1173 TCTTCAGGGCCT CCCGCCGCAGT TG[G/A]CCTTACA AGTTCTTCGTGA CCAGGT	916 AAGGGTTCCCAC G GCGTCCTGGTTT A[G/A]AACGTCTC ATTGGGCACGG CCAGTG	930 GTCCTGGTTTAG G AACGTCTCATTG G[G/gap]CACGG CCAGTGTCCACA GTCTGGGC	TATGCAATGTTC AGCATTTTTTTT [T/gap]TCACAGC ACTAGAGACCCT GTTAAA	CATTITITITIT CACAGCACTAGA [G/A]ACCCTGTTA AATAGGGGATAT GAGT
933	1118	1173	916	930	923	937
136 cg43985709	137 cg44027791	138 cg44027791	139 cg44027791	140 cg44027791	141 cg43984418	142 cg43984418
136	137	138	139	140	141	142

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			3 (3p25)	3 (3p25)	17 (17q21)
6.40E-235	6.90E-68	1.30E-115	0.00E+00	0.00E+00	0.00E+00
transcript Human Gene SWISSPROT- factor ID:Q60632 COUP TRANSCRIPTION FACTOR 1 (COUP-TF1) (COUP-TFI) - MUS MUSCULUS (MOUSE), 422 aa.	transcript Human Gene Similar to TREMBLNEW-factor ID:G2920821 TRANSCRIPTION FACTOR T-BOX 5 - HOMO SAPIENS (HUMAN), 518 aa.	Human Gene Homologous to TREMBLNEW-ID:G2738933 GLUTATHIONE TRANSFERASE (EC 2.5.1.18) - HOMO SAPIENS (HUMAN), 222 aa.	Human Gene SWISSPROT- ID:P31641 SODIUM- AND CHLORIDE DEPENDENT TAURINE TRANSPORTER - HOMO SAPIENS (HUMAN), 620 aa.	Human Gene SWISSPROT. ID:P31641 SODIUM- AND CHLORIDE. DEPENDENT TAURINE TRANSPORTER - HOMO SAPIENS (HUMAN), 620 aa.	transport Human Gene SWISSNEW-ID:P02730 BAND 3 ANION TRANSPORT PROTEIN (ANION EXCHANGE PROTEIN 1) (AE 1) - HOMO SAPIENS (HUMAN), 911 aa.pcls:SWISSPROT-ID:P02730 BAND 3 ANION TRANSPORT PROTEIN (ANION EXCHANGE PROTEIN 1) (AE 1) - HOMO SAPIENS (HUMAN), 911 aa.
transcript factor	transcript factor	transfera se	transport	transport	transport
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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543 CAGACAGACACA AGGTTCTTTTTT [T/gap]GTTTGTTT TGTTTTCCTCG CCAAC	915 TAGGGGCTGAA ACGCAGTCGGG GCC[G/gap]GGC ACTGCCCAGGA AGGGACTCCGG	510 TAGACAATACCA TCTCTAGGAACA C[A/G]CTGTCACT CACACATGGATG TGTTG	2407 TGTGCGTGCGT GTGTGTGTGTGT GT[G/gap]TGTAT . CGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	2408 GTGCGTGCGTG TGTGTGTGTGTG TG[T/gap]GTATC GTGTGTGTGTGTGTTT	388 CCCAGTCAAGAT AAGGAGGATCC CA[G/A]CAGCTC CCCTCCGAGGTT GGGCTCT
543	915	510	2407	2408	388
143 cg43945210	144 cg43917396	145 cg43949162	146 cg41653463	147 cg41653463	148 cg43285429
143	144	145	146	147	148

5.40E-52	3.30E-101	3.30E-101	0.00E+00	0.00E+00	0.00E+00
transport Human Gene Similar to SWISSPROT-ID:Q15012 GOLGI 4-TRANSMEMBRANE SPANNING TRANSPORTER MTP (KIAA0108) -HOMO SAPIENS (HUMAN), 233 aa.	Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	UNCLAS Human Gene SPTREMBL- SIFIED ACC:Q14162 KIAA0149 PROTEIN - HOMO SAPIENS (HUMAN), 830 aa.	UNCLAS Human Gene TREMBLNEW- SIFIED ACC:BAA25444 KIAA0518 PROTEIN - HOMO SAPIENS (HUMAN), 650 aa (fragment).	UNCLAS Human Gene TREMBLNEW- SIFIED ACC:BAA25444 KIAA0518 PROTEIN - HOMO SAPIENS (HUMAN), 650 aa (fragment).
transport	ubiquitin	ubiquitin	UNCLAS	UNCLAS	UNCLAS SIFIED
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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3322 AGCAGCAGCTG TTGGAGTAGAAC CG[C/A]GTCCAG GGCGCGACCAT CTTCATCG	TAAGCAGCTCTC, TTCTGTGACAGA C[A'gap]AATCAT GTAAGAACTGTG AAACCCC	743 GACAAATCATGT AAGAACTGTGAA A[C/A]CCCAGTTT ATGTAGCGTATC TCTTG	3075 ATTTTTAGTAGA GACGGGGTTTC AC[C/T]GTGTTAG CCAGGATGGTCT CGATCT	1999 AATAAGGGAGAA gap CTACTATTTTTT [gap/TJAAGATCT CAAAATAATTAA TAATAA	1999 AATAAGGGAGAA gap CTACTATTTTTT [gap/T]AAGATCT CAAAATAATTAA TAATAA
3322	721	743	3075	1999	1999
149 cg43918636	150 cg44005525	151 cg44005525	152 cg40986905	153 cg43303871	154 cg43303871
149	150	151	152	153	154

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Human Gene SPTREMBL- ACC:Q14511 ENHANCER OF FILMENTATION 1 - HOMO SAPIENS (HUMAN), 834 aa.	Human Gene SPTREMBL- ACC:Q12996 CLEAVAGE STIMULATION FACTOR 77KDA SUBUNIT - HOMO SAPIENS (HUMAN), 717 aa.	Human Gene SPTREMBL- ACC:O15089 KIAA0385 - HOMO SAPIENS (HUMAN), 1370 aa.	Human Gene TREMBLNEW- ACC:AAD22032 THYROID HORMONE RECEPTOR- ASSOCIATED PROTEIN COMPLEX COMPONENT TRAP240 - HOMO SAPIENS (HUMAN), 2174 aa.	UNCLAS Human Gene TREMBLNEW. SIFIED ACC:AAD22032 THYROID HORMONE RECEPTOR- ASSOCIATED PROTEIN COMPLEX COMPONENT TRAP240 - HOMO SAPIENS (HUMAN), 2174 aa.	UNCLAS Human Gene SPTREMBL-SIFIED ACC:060300 KIAA0553 PROTEIN -HOMO SAPIENS (HUMAN), 1095 aa (fragment).
UNCLAS	UNCLAS	SIFIED	SIFIED	SIFIED	UNCLAS SIFIED
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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3972 CTTCTACCCCAT GGGTAAATGTAT T[T/C]ACATATTA CCAAGAGAAGAA GCACA	501 AGGAATCCTGGA CAGGAGTTTTCT G[C/T]AGAGGCG TTTAAAACCCTA CCGAAT	189 GCTAACTGGTGA CAGTTATAAAAA C[A/G]CAAAAAG GAGCCTGGGAA ACAGCAA		383 AAAACAAGTTTC AGTAAAAAAAA A[A'gap]CTAAAA CAAACACTGAAG TAGAGTT	304 ACTGTATTATTTA TTTACATGGGCT[G/A]AAAGCAAAG AAAAATGAGTCC CTTC
3972	501	189	382	388 .	304
155 cg43918386	156 cg43923712	157 cg43936083	158 cg43936393	159 cg43936393	160 cg43940465
155	156	157	158	159	160

23	21 (21q22.1	21 (21q22.1)	16 (12q12)	-	=	=
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Human Gene SWISSPROT- ACC:P53794 SODIUM/MYO- INOSITOL COTRANSPORTER (NA(+)/MYO-INOSITOL COTRANSPORTER) - Homo sapiens (Human), 718 aa.		Human Gene SWISSNEW- ACC:Q13009 T-LYMPHOMA INVASION AND METASTASIS INDUCING PROTEIN 1 (TIAM1 PROTEIN) - Homo sapiens (Human), 1591 aa.	Human Gene SPTREMBL- ACC:Q61123 MATERNAL EMBRYONIC MESSAGE 3 (MEM3) - MUS MUSCULUS (MOUSE), 754 aa.	Human Gene TREMBLNEW- ACC:BAA20795 KIAA0337 PROTEIN - HOMO SAPIENS (HUMAN), 1510 aa.	Human Gene TREMBLNEW- ACC:BAA20795 KIAA0337 PROTEIN - HOMO SAPIENS (HUMAN), 1510 aa.	Human Gene TREMBLNEW- ACC:BAA20795 KIAA0337 PROTEIN - HOMO SAPIENS (HUMAN), 1510 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS
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10186 TAGTTTGTAAGA ACTGTACAAAAA A[A/gap]TGCTTC TGGAGATTTCTT TGGCAGA	TTTGGGATCCTG ATCAATTCTTTCT [G/A]ATGTTGTTG AAAATGACAAAG TTGG	2033 CAGCTGCCAAAAAA CCGTGTGTGCAA G[A/G]GCGCGAC CTAAGGGGACAT TCTTGT	485 TGAAGCAAACAA ACAAACAAAAA A[Wgap]GGAGAG CTTCATTAGTAG CCAAGAT	1011 GCGCATGGGTC CCTCCAGGAAG GCT[T/G]GGTTA GAGTCCCAGGG TGGTCCCCA	551 CCCTCAGCTTTG G GGGGGTCCTTC CT[G/A]AAGGG CTTCCCTTGGCA GAAGGGG	873 AGCATCTTGATC TAGAGGACTGA GG[G/A]CAGCCC CATCAGGCTGG GGCCCTGG
10186	1956	2033	485	1011	551	873
161 cg43940880	162 cg43950657	163 cg43950657	164 cg43973740	165 cg43980521	166 cg43980521	167 cg43980521
161	162	163	164	165	166	167

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0	0	0			1.5E-303	2.7E-299
Human Gene SWISSPROT- ACC:Q99743 NEURONAL PAS DOMAIN PROTEIN 2 (NEURONAL PAS2) (MEMBER OF PAS PROTEIN 4) (MOP4) - Homo sapiens (Human), 824 aa.	Human Gene SPTREMBL- ACC:Q92560 BRCA1 ASSOCIATED PROTEIN 1 (MYELOBLAST KIAA0272) - HOMO SAPIENS (HUMAN), 729 aa.	Human Gene SPTREMBL- ACC:Q92560 BRCA1 ASSOCIATED PROTEIN 1 (MYELOBLAST KIAA0272) - HOMO SAPIENS (HUMAN), 729 aa.	Human Gene SPTREMBL- ACC:Q13471 REPLICATION CONTROL PROTEIN 1 - HOMO SAPIENS (HUMAN), 861 aa.	Human Gene SPTREMBL- ACC:Q13471 REPLICATION CONTROL PROTEIN 1 - HOMO SAPIENS (HUMAN), 861 aa.		Human Gene SPTREMBL- ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	SIFIED	UNCLAS	UNCLAS	UNCLAS
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3287 AGCTACACAGAG GAAATAACTTAG G[T/C]ACTTTCTG TTTTTTAAAAAA AATA	787 AGAAGACCTGG CTTCCTTACAAC AG[G/A]GACAGG CTGGTGGCTGG GGCTAGAG	GCCCCCAGCTA GGACCCTGTAGT TG[G/A]GACCGT GGCATGATACAA GGACCTG	2876 TTCTGAGACAGG GTCTTGCTCTGT C[G/A]CCCAGGC TGGAGTGCAATG GCACGA	2955 GGGCTCAAGTG ATCCTCCCACCT CA[A/G]CCTCCC GAGTAGCTGAG ACTACAGG	650 GGTCTCCTCAGT GGTCTATTTTAG G[T/G]GTGGTTTT TTTTTTTTTTTT ACTG	2111 GAGCACAGATAC AGTTTATGTAAC T[7/A]GATGGAAG AAATGGAATTA CTCCA
3287	787	869	2876	2955	920	2111
168 cg44019839	169 cg44021891	170 cg44021891	171 cg44921773	172 cg44921773	173 cg43961485	174 cg43985955
168	169	170	171	172	173	174

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4.3E-299	4.3E-299	1E-297	5E-289	5E-289	7.2E-281	4.6E-279
UNCLAS Human Gene SPTREMBL-SIFIED ACC:075057 KIAA0469 PROTEIN -HOMO SAPIENS (HUMAN), 539 aa.	Human Gene SPTREMBL- ACC:O75057 KIAA0469 PROTEIN - HOMO SAPIENS (HUMAN), 539 aa.	Human Gene TREMBLNEW- ACC:AAC16046 FIP2 - HOMO SAPIENS (HUMAN), 577 aa.	Human Gene SWISSNEW- ACC:Q13573 NUCLEAR PROTEIN SKIP (SNW1 PROTEIN) (NUCLEAR RECEPTOR COACTIVATOR NCOA- 62) - Homo sapiens (Human), 536 aa.	Human Gene SWISSNEW- ACC:Q13573 NUCLEAR PROTEIN SKIP (SNW1 PROTEIN) (NUCLEAR RECEPTOR COACTIVATOR NCOA- 62) - Homo sapiens (Human), 536 aa.	UNCLAS Human Gene SWISSPROT- SIFIED ACC:Q14154 HYPOTHETICAL PROTEIN KIAA0141 - Homo sapiens (Human), 515 aa.	Human Gene SPTREMBL- ACC:Q14776 LZTR-1 - HOMO SAPIENS (HUMAN), 552 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED :	UNCLAS	UNCLAS
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1142 GCTCAGCAGCC CCTAGGAAGTTA AG[C/T]GAGAGC TACAGGGCAGG GGGGCTCC	TCTGTACATGTA ACATGTGGCCAT G[C/gap]CCAGGC ATCCCAGCATCT ATCCCAGCATCT	2082 GGTCACTGTTTC CTCGGCATCGT GC[T/C]GCCTGG AGAGAACTCCC GACCGGGA	372 TAGAATTTTCTAT CCCCCCCATT [C/T]TCCAGTAAT AAAAAGTAGTGC TGGG	412 GTAGTGCTGGG ATCTGGCACCCA GA[T/C]TTGGTTT TTATCCTGACCA	1415 AGCCATGTACGT GAAATTGCTTGG G[ATJACCTGAAC TCCCGCTGGAAT TTCTA	ATGCACCTGGC CCACATGGCTG GGC[G/A]CTGCA GCCTGCACTCCA CTTCCAGG
1142	494	2082	372	412	1415	277
175 cg44916647	176 cg44916647	177 cg44021459	178 cg43926814	179 cg43926814	180 cg43931431	181 cg44031765
175	176	177	178	179	180	181

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4.6E-279	3.60E-270	6.30E-258	6.60E-255	6.60E-255	5.30E-253	5.30E-253
Human Gene SPTREMBL- ACC:Q14776 LZTR-1 - HOMO SAPIENS (HUMAN), 552 aa.	Human Gene SPTREMBL- ACC:P78395 PREFERENTIALLY EXPRESSED ANTIGEN OF MELANOMA - HOMO SAPIENS (HUMAN), 509 aa.	Human Gene TREMBLNEW- ACC:BAA34492 KIAA0772 PROTEIN - HOMO SAPIENS (HUMAN), 468 aa.	Human Gene SPTREMBL- ACC:O76021 PBK1 PROTEIN - HOMO SAPIENS (HUMAN), 516 aa.	Human Gene SPTREMBL- ACC:O76021 PBK1 PROTEIN - HOMO SAPIENS (HUMAN), 516 aa.	Human Gene SPTREMBL- ACC:Q13283 GAP SH3 BINDING PROTEIN - HOMO SAPIENS (HUMAN), 466 aa.	Human Gene SPTREMBL- ACC:Q13283 GAP SH3 BINDING PROTEIN - HOMO SAPIENS (HUMAN), 466 aa.
UNCLAS	UNCLAS	SIFIED	SIFIED	SIFIED	UNCLAS	UNCLAS
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4030 CATCTTTATAGG CCACCACTGTGT G[C/T]TTGCTGC GCCGGGCACCC ACGAACT	331 TGCTTTGTTGCT TCAAGATGCATG C(A/C)CATCCTG GCTTTAGTGTCC AAGTAT	1118 ACAAAAATTAGC CGGGCATGGTG GC[G/A]CACGCC TGTAGTCCCAGC TACTTAG	534 GAGTGCAGTGG CTCACTGCAACC TCIC/TJGCCTCC CAGGTTCAAGCA ATTCTCC	552 CAACCTCCGCCT CCCAGGTTCAAG C[A/G]ATTCTCCT GCCTCAGCCTC	2720 ACCATTGCTTTG GTCAATTCAACC T[G/A]GGGGGAA AAGAGTCAAATA TGTCCA	CTCTGCACCACA GCACCGAGGAT AG[T/C]ACAAACC CCTCACGCGTCT GCGTCC
4030	331	1118	534	552	2720	2802
182 cg44031765	183 cg43970492	184 cg42847874	185 cg43951020	186 cg43951020	187 cg43971614	188 cg43971614
182	183	184	185	186	187	188

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4.80E-252	3.50E-240	2.50E-230	3.50E-224	9.40E-224	2.30E-220	2.10E-219
8.4	3.5	2.5	3.5	4.0	2.3	2.7
Human Gene SPTREMBL- ACC:075455 HERPESVIRUS ENTRY PROTEIN B - HOMO SAPIENS (HUMAN), 479 aa.	Human Gene SPTREMBL- ACC:Q92551 MYELOBLAST KIAA0263 - HOMO SAPIENS (HUMAN), 441 aa.	Human Gene TREMBLNEW- ACC:AAC97961 S164 - HOMO SAPIENS (HUMAN), 735 aa (fragment).	Human Gene TREMBLNEW- ACC:AAD20347 NEBULIN - HOMO SAPIENS (HUMAN), 977 aa (fragment).	UNCLAS Human Gene TREMBLNEW-SIFIED ACC:AAC68871 METHYL-CPG BINDING PROTEIN MBD2 - HOMO SAPIENS (HUMAN), 411 aa.	Human Gene SPTREMBL- ACC:075177 KIAA0693 PROTEIN - HOMO SAPIENS (HUMAN), 404 aa (fragment).	Human Gene SWISSNEW- ACC:Q93088 BETAINE HOMOCYSTEINE S- METHYLTRANSFERASE (EC 2.1.1.5) - Homo sapiens (Human), 406 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS
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192 CGGGCTCCCCA TGCAGCCCTAGA GA[C/gap]GGGA GAAGTCCAGTGT GCTGTTCCA	1684 AGGCAACACCT GTGGAGGAAGG GCA[C/T]GGGGC AAAAGCTCACCT CAGAAGTG	2176 TCAGATGACTTT ACAACCAAGGG AGIT/CJACACAG GGCAACAACAAAA TTAGAGG	307 GCAACTTATTTT AAAACCCAAAGG A[G/A]AAAGGAT GGTACTACCATA AATCAC	1072 AGTGGAAACATT TTGTTCAATTC [T/C]AGGAATTTT CTCTTGGGGAAA GTCG	3078 TCCCGAGTAGCT GGGATTACAGG CA[T/C]GCGCCA CCACGCCCAGC TAATTTT	1567 TGAAAAGTATTA TGGAAATCACTG C[A/T]GCACAGG AAAAGTAATTCA GATGTT
192	1684	2176	307	1072	3078	1567
189 cg43962954	190 cg43917689	191 cg43916785	192 cg43287642	193 cg43986954	194 cg42882543	195 cg43062833
189	190	191	192	193	194	195

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1.40E-215	5.30E-214	6.00E-206	6.90E-206	6.20E-204	2.7E-203	2.7E-203
Human Gene SPTREMBL- ACC:O75955 FLOTILLIN-1 - HOMO SAPIENS (HUMAN), 427 aa.	Human Gene TREMBLNEW- ACC:AAD4491 PTD004 - HOMO SAPIENS (HUMAN), 396 aa.	Human Gene SWISSPROT- ACC:P48745 NOV PROTEIN HOMOLOG PRECURSOR (NOVH) - Homo sapiens (Human), 357 aa.	UNCLAS Human Gene TREMBLNEW-SIFIED ACC:CAB46373 HYPOTHETICAL71.0 KD PROTEIN - HOMO SAPIENS (HUMAN), 653 aa (fragment).	Human Gene SPTREMBL- ACC:P78545 ESE-1B - HOMO SAPIENS (HUMAN), 371 aa.	UNCLAS Human Gene SWISSNEW- SIFIED ACC:P27539 EMBRYONIC GROWTH/DIFFERENTIATION FACTOR 1 PRECURSOR (GDF-1) - Homo sapiens (Human), 372 aa.	UNCLAS Human Gene SWISSNEW- SIFIED ACC:P27539 EMBRYONIC GROWTH/DIFFERENTIATION FACTOR 1 PRECURSOR (GDF-1) - Homo sapiens (Human), 372 aa.
UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS
SILENT- NONCODING	SILENT- NONCODING	SILENT. NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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342 AGACTAGTGTGG GCCTTGGGCCC CC[C/gap]TCATT TTGACATCCTTC CAGATGGT	385 GTTCACATTTAG TGAACCTGCATT T[C/gap]ATGGGG GGGGGGGGGGT ACACAGTA	TCTGTCTTTTATT TAACAAAAATG[T/CJAATTAACTG TAAACTTGGAAT CAAG	1516 CTATAGCAGAGG GGGTTATGGGG GC[G/A]GGAGGG TAGACTGACATA CAGAAGT	825 ACGCCAGTCCA GAAAGAAGGTG CTG[G/A]AGCCC CTGCTCTGTCCT CTCCATCA	1787 TAAGGGTGAGC AGCAGCAGGAG CGC[A/T]TTGAAG AAGAAGTAGAAG GGGATGT	1834 ATGTCAGGCACC GTGCGCAGACT GC[A/G]GTGACT GGTGGCATACA GGACCTTG
342	385	1340	1516	825	1787	1834
196 cg43959148	197 cg43950766	198 cg43958860	199 cg43968205	200 cg43950996	201 cg44924222	202 cg44924222
196	197	198	199	200	201	202

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2.7E-203	3.7E-197	2E-189	3E-188	7.3E-185
Human Gene SWISSNEW- ACC:P27539 EMBRYONIC GROWTH/DIFFERENTIATION FACTOR 1 PRECURSOR (GDF-1) - Homo sapiens (Human), 372 aa.	Human Gene SPTREMBL- ACC:Q16842 BETA-GALACTOSIDE ALPHA-2,3-SIALYLTRANSFERASE (EC 2.4.99.4) (CMP-N- ACETYLNEURAMINATE-BETA- GALACTOSAMIDE-ALPHA-2,3- SIALYL- TRANSFERASE) - HOMO SAPIENS (HUMAN), 350 aa.	UNCLAS Human Gene SWISSPROT- SIFIED ACC:Q10981 GALACTOSIDE 2-L- FUCOSYLTRANSFERASE 2 (EC 2.4.1.69) (GDP-L-FUCOSE:BETA- D- GALACTOSIDE 2-ALPHA-L- FUCOSYLTRANSFERASE 2) (ALPHA(1,2)FT 2) (FUCOSYLTRANSFERASE 2) (SECRETOR BLOOD GROUP ALPHA- 2- FUCOSYLTRANSFERASE) (SECRETOR FACTOR) (SE) (SE2) - Homo sapiens (Human), 343 aa.	Human Gene SWISSPROT- ACC:P10658 PROBABLE PHOSPHOSERINE AMINOTRANSFERASE (EC 2.6.1.52) (PSAT) (ENDOMETRIAL PROGESTERONE-INDUCED PROTEIN) (EPIP) - Oryctolagus cuniculus (Rabbit), 370 aa.	Human Gene SPTREMBL- ACC:Q15435 YEAST SDS22 HOMOLOG - HOMO SAPIENS (HUMAN), 360 aa.
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2073 GTACCGGAAGG CGTAGGAGGAG ACG[A/G]TGAGG ATGAGAGTGACC ACGTGGTG	1943 GAGGACAAAAAC AGAAAGCCCTGT G[A/T]GTGTGGG AAAACTCCGCTG CAGAGA	GGCTGGAGTGC AGTGGCACGAT CTC[G/A]GCTCA CTGCAAGCCTCC GCCTCCCG	CTGGGGGCGTC CATGGTGCGGC GGC[G/C]AGGGC GGTGAGTCAGC CAAGGAGGA	199 ATCTGAAAATGG TGTGTGGCGTC GC[G/A]CGCGCC AGCTATCGTCAG
2073	1943	2321	2163	199
203 cg44924222	204 cg44916575	205 cg42650960	206 cg43947129	207 cg43922383
203	204	202	206	207

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7.3E-185	7.3E-185	7.3E-185	7.3E-185	2.4E-177	-176	-175
7.3E	7.3	7.3E	7.3E	2.4E	1.70E-176	6.60E-175
Human Gene SPTREMBL- ACC:Q15435 YEAST SDS22 HOMOLOG - HOMO SAPIENS (HUMAN), 360 aa.	Human Gene SPTREMBL- ACC:Q15435 YEAST SDS22 HOMOLOG - HOMO SAPIENS (HUMAN), 360 aa.	Human Gene SPTREMBL- ACC:Q15435 YEAST SDS22 HOMOLOG - HOMO SAPIENS (HUMAN), 360 aa.	Human Gene SPTREMBL- ACC:Q15435 YEAST SDS22 HOMOLOG - HOMO SAPIENS (HUMAN), 360 aa.	UNCLAS Human Gene TREMBLNEW- SIFIED ACC:AAD41634 LYSOSOMAL TRAFFICKING REGULATOR 2 - MUS MUSCULUS (MOUSE), 703 aa (fragment).	Human Gene SPTREMBL- ACC:Q18476 C35A5.8 - CAENORHABDITIS ELEGANS, 1078 aa.	UNCLAS Human Gene TREMBLNEW- SIFIED ACC:AAD34394 NUCLEAR PORE COMPLEX INTERACTING PROTEIN NPIP - HOMO SAPIENS (HUMAN), 350 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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222 CGCGCGCCAGC TATCGTCAGTGC CT[gap/G]TTATT GCCATTGGGTTT GTGACTGT	TCAGTGCCTTTA TTGCCATTGGGT T[T/gap]GTGACT GTTGATATAGTG ACGACCT	250 ATTGCCATTGGG TTTGTGACTGTT G[A/G]TATAGTGA CGACCTCAGGA GCAACA	263 TTGTGACTGTTG ATATAGTGACGA C[C/G]TCAGGAG CAACAGGTGGG TTAAAAA	458 CTTTTTAAATAAA A TGACTGCGAGT G[A/G]GTGTAAAT TCTGAGAAAATT ACATT	1167 ACATTTGGAATT TTAGCTTTTTTT [T/gap]GCCTCTC TACTGTGTCACT AAATAT	2329 CTGAGTAGCTG GGATTACAGGC GTG[T/C]GCCAC CATGCCCAGCTA ATTTTTG
222	539	250	263	458	1167	2329
208 cg43922383	209 cg43922383	210 cg43922383	211 cg43922383	212 cg43953935	213 cg43933591	214 cg43949875
208	209	210	211	212	213	214

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3.20E-168	1.30E-162	5.10E-161	5.1E-161	5.1E-161	6.7E-159	7.7E-158
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Human Gene SWISSPROT. ACC:P49752 HYPOTHETICAL PROTEIN ZAP113 - Homo sapiens (Human), 309 aa (fragment).	Human Gene SWISSPRÖT- ACC:Q14140 HYPOTHETICAL PROTEIN KIAA0127 - Homo sapiens (Human), 314 aa.	Human Gene SPTREMBL- ACC:Q63965 TRICARBOXYLATE CARRIER - RATTUS NORVEGICUS (RAT), 357 aa (fragment).	Human Gene SPTREMBL- ACC:Q63965 TRICARBOXYLATE CARRIER - RATTUS NORVEGICUS (RAT), 357 aa (fragment).	Human Gene SPTREMBL- ACC:Q63965 TRICARBOXYLATE CARRIER - RATTUS NORVEGICUS (RAT), 357 aa (fragment).	Human Gene TREMBLNEW- ACC:AAD39906 FH1/FH2 DOMAIN- CONTAINING PROTEIN FHOS - HOMO SAPIENS (HUMAN), 1164 aa.	UNCLAS Human Gene SWISSPROT- SIFIED ACC:P55040 GTP-BINDING PROTEIN GEM (GTP-BINDING MITOGEN-INDUCED T-CELL PROTEIN) (RAS-LIKE PROTEIN KIR) Homo sapiens (Human), 296 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS
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	2077 TGTATATGTGTA CGTAGGTAGATG T[G/A]TGCAGCAT GCGCAGGTTT GCCAGGTTT	1461 CAGAATGAGCTG CAGAGGTTTCCT C(C/T)CTGCTTTA CAATCCCTTATT GAAGT	384 TAAACATCTACA // GAGTTGAAACAT A[A/C]TCTGTCAT ATTAAATATATA TCTA	624 TAGTCTCACTTC // TTACCAAAAAAA A[A/gap]CAATGA ACTGGATTCAGC CCACTCA	996 GCAGTGCAGGA (GATGACAGAGT GAG[G/A]AGGGC CCAGAGCAGAAT TCTGGCCC	1687 AAACAATTTTTGTO TCAATGCCCACC [G/A]AGACATATA GAATTGGGAACT GATA
1131	2077	1461	384	624	966	1687
215 cg43100840	216 cg43922270	217 cg43993462	218 cg43993462	219 cg43993462	220 cg43329741	221 cg42910688
215	216	217	218	219	220	221

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1.70E-152	1.10E-150	3.30E-150	7.80E-149	1.20E-145	1.30E-141	2.60E-141
1.70	1.10	3.30	7.80	1.20	1.30	2.60
Human Gene TREMBLNEW. ACC:BAA76848 KIAA1004 PROTEIN - HOMO SAPIENS (HUMAN), 496 aa (fragment).	Human Gene Homologous to TREMBLNEW-ACC:AAC69899 SACM21 - MUS MUSCULUS (MOUSE), 721 aa.	Human Gene Homologous to SPTREMBL-ACC:Q15024 MRNA (HA0800) FOR ORF - HOMO SAPIENS (HUMAN), 290 aa (fragment).	Human Gene Homologous to TREMBLNEW-ACC:CAB43230 HYPOTHETICAL 33.3 KD PROTEIN - HOMO SAPIENS (HUMAN), 290 aa (fragment).	Human Gene Homologous to SWISSNEW-ACC:P25686 DNAJ PROTEIN HOMOLOG 1 (HSJ-1) - Homo sapiens (Human), 351 aa.	Human Gene Homologous to SPTREMBL-ACC:O75070 KIAA0483 PROTEIN - HOMO SAPIENS (HUMAN), 299 aa (fragment).	Human Gene Homologous to SPTREMBL-ACC:Q99773 HYPOTHETICAL 30.9 KD PROTEIN - HOMO SAPIENS (HUMAN), 285 aa.
UNCLAS	SIFIED	SIFIED	UNCLAS	SIFIED	UNCLAS	UNCLAS
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969 TGCTGGGGACC ATGGATGGGGA GGA[G/gap]GGG CACAGGGCCCA GTGCAGATGAA	160 GCTGAGATCTTA GGTCAAAAAGCT A[C/T]AGAAAAGA AATCACTTTGAA AAACA	325 CCGGTTTAAAAG GAAAAGTAAAAA A[C/A]AATCCACA GTTGAGCAGTTG ATGTG	682 TCACAGCTGGAT TGAAAGAGTATT T[G/A]GGAAATGT GGCAATGTTTATATATATATATATATATATATATATATAT	503 GCAAGACGTGT CAGGGGAACCA AGG[C/T]TCAGAT CATTCCCCCTTC ATCTACA	2109 TATAAGTGTATG CAATAGAAATTT G[G/T]ATTTTGTA ATAGAAAATTTA CCTTG	112 GGCCCAGTCCT GGGGCTCTGGG AGG[C/gap]TCAC GCTCCCTCCTCA
696	160	325	682	503	2109	112
222 cg43967474	223 cg43964140	224 cg43990820	225 cg43930377	226 cg43969800	227 cg43973724	228 cg43258867
222	223	224	225	226	227	228

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1.10E-140	1.40E-140	1.40E-140	1.70E-139	1.70E-139	1.70E-139	1.70E-139
1.10	1.40	1.40	1.70	1.70	1.70	1.70
Human Gene Homologous to SPTREMBL-ACC:Q99769 HYPOTHETICAL 26.4 KD PROTEIN - HOMO SAPIENS (HUMAN), 255 aa.	UNCLAS Human Gene Homologous to SIFIED TREMBLNEW-ACC:AAD28325 LUMAN2 - HOMO SAPIENS (HUMAN), 272 aa.	UNCLAS Human Gene Homologous to SIFIED TREMBLNEW-ACC:AAD28325 LUMAN2 - HOMO SAPIENS (HUMAN), 272 aa.	UNCLAS Human Gene Homologous to SIFIED SPTREMBL-ACC:O14681 PIG8 - HOMO SAPIENS (HUMAN), 318 aa.	Human Gene Homologous to SPTREMBL-ACC:O14681 PIG8 - HOMO SAPIENS (HUMAN), 318 aa.	Human Gene Homologous to SPTREMBL-ACC:O14681 PIG8 - HOMO SAPIENS (HUMAN), 318 aa.	Human Gene Homologous to SPTREMBL-ACC:O14681 PIG8 - HOMO SAPIENS (HUMAN), 318 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	SIFIED	UNCLAS	UNCLAS
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792 GACGATGTGGA CGCTGGGAGGG ATC[T/gap]TGGC GTTGGTTTTCTG AAAGCCAGG	<u>,,, </u>	2909 ATTTIGTCATTTT TTACATCAACTT[C/T]ATGGTCTTG TTTTACATGGT AATT	856 CAAAATTAACAA ATTCACAAAATA C[A/G]ACAGCTA GAATTACAAAAT CCATTC	952 GGCACAGGGAG AAAAACAAAGTG TT[C/gap]CAATC AGTCCAGGCAC AGGGACTGG	391 ACATTGACCCCT TCAGTTCCTATA T[G/A]CAGCACC CAATATTCCTTT GAAATA	515 CAGGTTTAGTGT TGTTGTAGTGGC A[C/T]TTGTCCAG AATTGGTACCTC CCCAT
792	2819	2909	826	952	391	515
229 cg42907867	230 cg43920176	231 cg43920176	232 cg43950100	233 c943950100	234 cg43950100	235 cg43950100
229	230	231	232	233	234	235

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4.20E-134	4.80E-129	4.80E-129	1.80E-126	3.70E-126	4.00E-122
4.20	4.80	4.80	1.80	3.70	4.00
Human Gene Homologous to SWISSNEW-ACC:P11226 MANNOSE- BINDING PROTEIN C PRECURSOR (MBP-C) (MBP1) (MANNAN-BINDING PROTEIN) (MANNOSE-BINDING LECTIN) - Homo sapiens (Human), 248 aa.	Human Gene Homologous to SPTREMBL-ACC:O75035 KIAA0447 PROTEIN - HOMO SAPIENS (HUMAN), 254 aa.	Human Gene Homologous to SPTREMBL-ACC:O75035 KIAA0447 PROTEIN - HOMO SAPIENS (HUMAN), 254 aa.	Human Gene Homologous to SPTREMBL-ACC:O60499 SYNTAXIN 10 - HOMO SAPIENS (HUMAN), 249 aa.	Human Gene Homologous to TREMBLNEW-ACC:AAD29690 PUTATIVE ZINC FINGER TRANSCRIPTION FACTOR OVO1 - MUS MUSCULUS (MOUSE), 267 aa.	Human Gene Homologous to TREMBLNEW-ACC:AAD27724 CGI- 15 PROTEIN - HOMO SAPIENS (HUMAN), 329 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS
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1317 CTCTATGAACTC TGTTTTCTTTCTA [Agap]TGAGATA TTAAACCATGTA AAGAAC	1310 TGAAAGTTAGAG AGCTGCAAATCT C[T/gap]TAAGTAT CAATGTAAAGAA GCAGAT	511 AATGCCACTTTC AGATGGAAGGG AA[A/G]TGAGGT GGAAAGAT AAAAGGA	923 AGCACTTTGGAG CTGGCCTCGCC CC[C/gap]TAGGA GGAGAGGGTCC CTCCTGGGT	1067 GGGGGGTGCTCC TGGAAGCCCCA AGA[G/C]CATCC AGGATTGCCTCC CAGCTGCC	990 CAGCTCCCAGCT ACCATGATGAGC C[C/gap]TGGCGG CTTGAGCACAGT GAGTGCT
1317	1310	511	923	1067	066
236 cg43132640	237 cg44938448	238 cg44938448	239 cg43949897	240 cg42549778	241 cg44028574
236	237	238	239	240	241

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:-121	:-121	8.50E-120	8.50E-120	8.50E-120	5.40E-118	5.40E-118
2.20E-121	2.20E-121	8.50	8.50	8.50	5.40	5.406
Human Gene Homologous to TREMBLNEW-ACC:BAA83010 KIAA1058 PROTEIN - HOMO SAPIENS (HUMAN), 1534 aa (fragment).	Human Gene Homologous to TREMBLNEW-ACC:BAA83010 KIAA1058 PROTEIN - HOMO SAPIENS (HUMAN), 1534 aa (fragment).	Human Gene Homologous to SPTREMBL-ACC:O75391 SPERM ACROSOMAL PROTEIN - HOMO SAPIENS (HUMAN), 293 aa.	Human Gene Homologous to SPTREMBL-ACC:O75391 SPERM ACROSOMAL PROTEIN - HOMO SAPIENS (HUMAN), 293 aa.	Human Gene Homologous to SPTREMBL-ACC:075391 SPERM ACROSOMAL PROTEIN - HOMO SAPIENS (HUMAN), 293 aa.	Human Gene Homologous to SWISSNEW-ACC:014530 PROTEIN 1-4 - Homo sapiens (Human), 226 aa.	Human Gene Homologous to SWISSNEW-ACC:O14530 PROTEIN 1-4 - Homo sapiens (Human), 226 aa.
SIFIED	SIFIED	SIFIED	UNCLAS	SIFIED	UNCLAS	UNCLAS
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	1172 GAAGAGAAGATI AGGTTTAATTTAT [T/C]TGAAGTTTT CATGGTGTTAAT ATTT	1212 CCCCCGCAGAC TAGAGGCCGGAGGCTT/GJTCTGGTGGCGAGGAGGTTTTTTTTTTTTTTTTTTTTTT	CCCCGCAGACA GAGGCCGGAGG CTT[T/G]CTGGTG CAGCGATGTTTA ATGGCAA	1402 ATGTTACAGTAT GTACAAGACCCC T[C/gap]CCCTCG GGGGACGGGCC GGGGACCGGGCC	492 AAATAGAGAATC CAGACCTTCCC AGACCCTTCCC AGAJATAATTTA AGAACTGAGTTT TCCTC	670 ATTTAAATCTGA / AGCAGAAAAAA A[Agap]GACAAT TTACAAAGAATT ATTGAGC
1088	1172	1212	1213	1402	492	670
242 cg44035718	243 cg44035718	244 cg43963595	245 cg43963595	246 cg43963595	247 cg43992566	248 cg43992566
242	243	244	245	246	247	248

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6.90E-118	1.00E-114	2.70E-111	4.30E-109	1.70E-107	1.20E-104	1.40E-101
Human Gene Homologous to SPTREMBL-ACC:O75839 TSC501 PROTEIN - HOMO SAPIENS (HUMAN), 227 aa.	UNCLAS Human Gene Homologous to SIFIED SPTREMBL-ACC:O15262 RING FINGER PROTEIN - HOMO SAPIENS (HUMAN), 247 aa.	Human Gene Homologous to SPTREMBL-ACC:000577 COSMID 6E5 CDK4, SAS AND KIAA0167 GENES, COMPLETE CDS, AND OS9 HOMO SAPIENS (HUMAN), 227 aa.	Human Gene Homologous to SWISSNEW-ACC:043583 DRP1 PROTEIN (DRP) - Homo sapiens (Human), 243 aa.	Human Gene Homologous to TREMBLNEW-ACC:BAA74894 KIAA0871 PROTEIN - HOMO SAPIENS (HUMAN), 469 aa.	UNCLAS Human Gene Homologous to SIFIED TREMBLNEW-ACC:BAA83057 KIAA1105 PROTEIN - HOMO SAPIENS (HUMAN), 730 aa (fragment).	Human Gene Homologous to SWISSNEW-ACC:P78560 DEATH DOMAIN CONTAINING PROTEIN CRADD (CASPASE AND RIP ADAPTATOR WITH DEATH DOMAIN) (RIP ASSOCIATED PROTEIN WITH A DEATH DOMAIN) - Homo sapiens (Human), 199 aa.
UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS	SIFIED	UNCLAS SIFIED
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907 TCCCTGCACGC G CTTTACGTCAGA CT[G/A]TCACCAC AAGAGCCTTGAG TGTCCA	552 ACGTGGTGCTG A GTAGTGTCTTGT TG[A/G]GTGTGA ATTCTCTCTCTCT	1466 GTGCAATGGCAT C GATCTCGGCTCA C[C/T]GCAACCT CTGCCTCCCGG GTTCAAG	404 AACTGCAGACAA C ATTTCAAATTCA [C/A]TTCTTTACT TCTCCAAGATCT TCGA	711 CTTTAATGAAAC A ACTTTGGATCGT C[A/G]GTGCTGA AGTGAAAGAAT GTGCTG	936 GATGCTAAAAGC G TTCTGCGAAATG T[G/A]TTCACGTT TAATGTTGGGAA ATCCC	TTCAGCCCACAT A GACTCAGGGAC AC[A/gap]CTCCC CAGCGGTTGCT GGAGGGACC
907	552	1466	404	711	936	471
249 cg43067745	250 cg42697161	251 cg43957889	252 cg42391024	253 cg43976566	254 cg44001900	255 cg43954569
249	250	251	252	253	254	255

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4.40E-100	2.90E-99	7.1E-97	3.8E-95	6.8E-95	6.80E-95	9.20E-91
UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:P78317 ZINC FINGER PROTEIN-HOMO SAPIENS (HUMAN), 190 aa.	Human Gene Similar to TREMBLNEW- ACC:BAA81666 DNA POLYMERASE ETA - HOMO SAPIENS (HUMAN), 713 aa.	UNCLAS Human Gene Similar to SWISSPROT-SIFIED ACC:Q16635 TAFAZZIN - Homo sapiens (Human), 292 aa.	Human Gene Similar to REMTREMBL-ACC:G1100182 T-CELL RECEPTORBETA - HOMO SAPIENS (HUMAN), 311 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD43192 WUGSC:H_DJ0726N20.1 PROTEIN - HOMO SAPIENS (HUMAN), 191 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:AAD43192 WUGSC:H_DJ0726N20.1 PROTEIN - HOMO SAPIENS (HUMAN), 191 aa (fragment).	Human Gene Similar to SPTREMBL-ACC:Q14206 ZAKI-4 MRNA IN HUMAN SKIN FIBROBLAST, COMPLETE CDS - HOMO SAPIENS (HUMAN), 192 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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791 AGTGGCCCCTTT CCCGCCCTGAA GA[T/C]GTTTCAC ACGAAAAGGCC GTTGTT	711 TGGCAAAACTGC CAGCAGCGGTT GC[C/T]GAAAAT GCTGGGTTCGG TGCCTACT	626 ACCAGCTCGGA GAGGGCACTTG AGA[G/T]GGTCT ATGAACAAATCT GTCTAAAA	1906 AGGCCTGATGC ACATGTGCACAG GT[A/G]CCTACAT GCTCTGTTCTTG TCAACA	1363 TGGCCAGGGAC CTGAGCCCGAG ACA[C/T]CCCTG CATTTGATCCAA CCAGGTCA	1364 GGCCAGGGACC TGAGCCCGAGA CAC[C/T]CCTGC ATTTGATCCAAC CAGGTCAG	1080 TTGCATCTAAAG TAATTCATTAATG [T/A]ACAGGAGTA GATGAGGCCTG GCACA
791	711	626	1906	1363	1364	1080
256 cg43925519	257 cg43145684	258 cg43981803	259 cg44006111	260 cg44924968	261 cg44924968	262 cg43977021
256	257	258	259	260	261	262

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9.20E-91	9.20E-91	9.20E-91	9.20E-91	9.20E-91	1.50E-89	4.5E-89
Human Gene Similar to SPTREMBL-ACC:Q14206 ZAKI-4 MRNA IN HUMAN SKIN FIBROBLAST, COMPLETE CDS - HOMO SAPIENS (HUMAN), 192 aa.	Human Gene Similar to SPŢREMBL-ACC:Q14206 ZAKI-4 MRNA IN HUMAN SKIN FIBROBLAST, COMPLETE CDS - HOMO SAPIENS (HUMAN), 192 aa.	Human Gene Similar to SPTREMBL-ACC:Q14206 ZAKI-4 MRNA IN HUMAN SKIN FIBROBLAST, COMPLETE CDS - HOMO SAPIENS (HUMAN), 192 aa.	Human Gene Similar to SPTREMBL-ACC:Q14206 ZAKI-4 MRNA IN HUMAN SKIN FIBROBLAST, COMPLETE CDS - HOMO SAPIENS (HUMAN), 192 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q14206 ZAKI-4 MRNA IN HUMAN SKIN FIBROBLAST, COMPLETE CDS - HOMO SAPIENS (HUMAN), 192 aa.	Human Gene Similar to SPTREMBL-ACC:O88994 HYPOTHETICAL 38.2 KD PROTEIN - RATTUS NORVEGICUS (RAT), 338 aa.	Human Gene Similar to SPTREMBL- ACC:000581 HYPOTHETICAL 20.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 176 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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1087 TAAAGTAATTCA TTAATGTACAGG AGAAJTAGATGA GGCCTGGCACA CATAGCA	1098 ATTAATGTACAG GAGTAGATGAG GC[C/TJTGGCAC ACATAGCAGAAG GTAATGG	CAGGAGTAGAT GAGGCCTGGCA CAC[A/G]TAGCA GAAGGTAATGGT TCTATAGG	1116 ATGAGGCCTGG CACACATAGCAG AA[G/A]GTAATG GTTCTATAGGTG TATCTTC	1169 TAATGCACTTTG GGCTAGAGAAT A[G/C]AAAAATCA CACGTAACAAAA	303 CACAGAATTCAG AACTTTTCACC CIG/CIGAACTGG AGAAGGAGCAC TCCGTCA	TTTGAGAGCTGC AGCAGAAGCGG CT[G/T]TATCACA GACTGGATTTAG TTATGA
1087	1098	1107	1116	1169	303	915
263 cg43977021	264 cg43977021	265 cg43977021	266 cg43977021	267 cg43977021	268 cg43999373	269 cg43980889
263	264	265	266	267	268	269

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4.5E-89	7.4E-89	3.4E-84	3.5E-82	4.50E-82	6.60E-81	2.60E-79
Human Gene Similar to SPTREMBL-ACC:000581 HYPOTHETICAL 20.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 176 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD40853 SIRTUIN TYPE 5 -HOMO SAPIENS (HUMAN), 310 aa.	Human Gene Similar to SPTREMBL-ACC:073884 PUTATIVE PHOSPHATASE - GALLUS GALLUS (CHICKEN), 268 aa.	Human Gene Similar to SWISSPROT-ACC:P34624 HYPOTHETICAL 63.5 KD PROTEIN ZK353.1 IN CHROMOSOME III - Caenorhabditis elegans, 548 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB43239 HYPOTHETICAL41.6 KD PROTEIN - HOMO SAPIENS (HUMAN), 383 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:CAB45773 HYPOTHETICAL 18.0 KD PROTEIN - HOMO SAPIENS (HUMAN), 162 aa (fragment).	Human Gene Similar to SPTREMBL- ACC:O14684 PIG12 - HOMO SAPIENS (HUMAN), 153 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS
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936 GGCTGTATCACA GACTGGATTTAG T[T/G]ATGATGAA AATACTGGACTG	611 TAGATTGTTCAG TACTCAGCTCAC C[A/gap]CCCATA AGACCATTTCTC CTCTGCG	GGCAACAAGTTA CAGCGGCGGA GA[T/A]GTTCCTT CTCTCACCTGCC GGGGGG	684 AGAAGACAGCG CGCAGAAATAGT GC[G/A]GAGAGA AATGACCAGTAC TATTTAT	537 TAAGATCCTCCA TCCCACCAAAA T[A/G]ACCCACAA TGACTCCAAATC	512 CATTGGCAACG GCTGCCCACTA GGG[G/gap]CACT GCCACTTGCCTG GCTCAAACT	845 CCAGGCTTGCCT CTAGATTGGCTG G[G/gap]CCAGAA TTTCTGGGGTCA GTCTGAA
936	611	317	684	537	512	845
270 cg43980889	271 cg44030196	272 cg40336929	273 cg43920571	274 cg43958980.	275 cg43320682	276 cg42708544
270	271	272	273	274	275	276

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1.20E-75	1.30E-75	1.90E-74	9.50E-73	9.50E-73	9.5E-73
UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q94547 RGA AND ATU GENES, COMPLETE CDS - DROSOPHILA MELANOGASTER (FRUIT FLY), 579 aa.	Human Gene Similar to SPTREMBL- ACC:060896 MRNA ENCODING RAMP3 PRECURSOR - HOMO SAPIENS (HUMAN), 148 aa.	Human Gene Similar to SPTREMBL- ACC:O75272 R33729_1, PARTIAL CDS - HOMO SAPIENS (HUMAN), 152 aa (fragment).	Human Gene Similar to SWISSNEW- ACC:P01225 FOLLITROPIN BETA CHAIN PRECURSOR (FOLLICLE- STIMULATING HORMONE) (FSH-B) - Homo sapiens (Human), 129 aa.	Human Gene Similar to SWISSNEW- ACC:P01225 FOLLITROPIN BETA CHAIN PRECURSOR (FOLLICLE- STIMULATING HORMONE) (FSH-B) - Homo sapiens (Human), 129 aa.	Human Gene Similar to SWISSNEW- ACC:P01225 FOLLITROPIN BETA CHAIN PRECURSOR (FOLLICLE- STIMULATING HORMONE) (FSH-B) - Homo sapiens (Human), 129 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	SIFIED	UNCLAS	UNCLAS
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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637 GGGAAGTAAAAT GAAGGAAGCAG AC[C/T]TCTTGCT CATCTTTCCAAA TGAAAT	TAAGGCCAGAG CTTGTGTGCTGG GC[A/gap]CAGAA ATCACCTGCTGC ATCCTGTG	607 CAGTGATGTGCT GGCCCTTTCAG GG[A/C]CACAGG CCCTTCAGCTT CACCGGA	1328 CCAAACTATCTC ACCCTACCCTC C[T/C]AGGATCC ACTTCTTTGGAA TGACAA	1540 CTÁTTTTATCCAT CCATGITCTCCC [Agap]AATCTGT GCTTTCTTTCAA CAGGTT	1542 TTTTATCCATCC ATGTTCTCCCAA Algap/AJTCTGTG CTTTCTTTCAAC AGGTTAT
637	843	607	1328	1540	1542
277 cg43949796	278 cg43298234	279 cg43926358	280 cg35060315	281 cg35060315	282 cg35060315
277	278	279	280		282

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9.5E-73	9.5E-73	1.1E-71	2E-71	2E-71	5.3E-69
Human Gene Similar to SWISSNEW-ACC:P01225 FOLLITROPIN BETA CHAIN PRECURSOR (FOLLICLE-STIMULATING HORMONE) (FSH-B) -Homo sapiens (Human), 129 aa.	Human Gene Similar to SWISSNEW-ACC:P01225 FOLLITROPIN BETA CHAIN PRECURSOR (FOLLICLE-STIMULATING HORMONE) (FSH-B) -Homo sapiens (Human), 129 aa.	Human Gene Similar to SPTREMBL-ACC:P90839 F16A11.1 -CAENORHABDITIS ELEGANS, 673 aa.	Human Gene Similar to SPTREMBL-ACC:Q23382 ZK1058.4 -CAENORHABDITIS ELEGANS, 442 aa.	Human Gene Similar to SPTREMBL-ACC:Q23382 ZK1058.4 -CAENORHABDITIS ELEGANS, 442 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD43443 26S PROTEASOME SUBUNIT P40.5 - MUS MUSCULUS (MOUSE), 376 aa.
SIFIED	UNCLAS	UNCLAS	SIFIED	UNCLAS	UNCLAS
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1557 GTTCTCCCAAAT CTGTGCTTTCTT T[C/T]AACAGGTT ATATTAAAAACT ATTT	1562 CCCAAATCTGTG CTTTCTTTCAAC A(G/C)GTTATATA TTAAAACTATTTC ATGA	18 TGTACAACTGAT TAGAG[A/gap]GT TTTTTTTCTT. TTCTTTTCAA	719 CCTCTCCTCCAA A GAGTTGGTTCCG C[A/gap]AGAGGT GGAAGAACTCT CAATAGT	884 CACAGCCATAAT ATAGAGAACAGA G[C/gap]TTCTCC ATGAACATCCAC CAGGCTG	65 AGCAGCCAGCTT CATTGGCTGCAA A[C/T]GCCTCTT CAGGTGAGTCAA AGGAG
1557	1562	18	719	884	92
283 cg35060315	284 cg35060315	285 cg44126579	286 cg43951096	287 cg43951096	288 cg43960676
283	284	285	286	287	288

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1E-68	1.6E-67	1.6E-67	2.3E-66	2.3E-66	4.3E-66	8.8E-65
Human Gene Similar to SWISSPROT-ACC:P50636 GAMETOGENESIS EXPRESSED PROTEIN GEG-154 - Mus musculus (Mouse), 429 aa.	UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:AAD39844 HSPC028 - HOMO SAPIENS (HUMAN), 419 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD39844 HSPC028 - HOMOSAPIENS (HUMAN), 419 aa.	Human Gene Similar to TREMBLNEW- ACC:AAD39515 HERMES - MUS MUSCULUS (MOUSE), 197 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD39515 HERMES - MUS MUSCULUS (MOUSE), 197 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD29427 MYOMEGALIN -RATTUS NORVEGICUS (RAT), 2324 aa.	Human Gene Similar to SPTREMBL- ACC:060223 SSX3 - HOMO SAPIENS (HUMAN), 188 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
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1101 TCACCTCAGATG AGTGTGGCTCC CC[C/G]CGCTCC CATACTGCAGCC TGCCCCT	364 AAGGGAAGCCT ATCCTATTTTTT T[/gap]TCCTTTG CGAAAACAGAAG	AGGGAAGCCTAT CCTATTTTTTTT T/gap]CCTTTGCG AAAACAGAAGCC AAGTT	CCGGGGAGGTG GTTCTGGTAATC TG[G/T]GGGGGA GCCGGGACAGG CGCCCCGA	604 GGGAGGTGGTT CTGGTAATCTGG GG[G/T]GGAGCC GGGACAGGCGC CCCGAGTT	210 CTCTCTCTTCGC CGCCGACGCAG AA[A/G]GGAGGT GGGGAGGAAAA AGCTGCTG	131 GTAAGGTAAAAT GTGAATCAATAT G[T/C]TAGTTCTG GGCAATTATTCT GCAAA
1101	364	365	601	604	210	131
289 cg43323149	290 cg43969533	291 cg43969533	292 cg39376027	293 cg39376027	294 cg43976681	295 cg43085556
289	290	291	. 292	293	294	295

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8.8E-65	8.8E-65	8.8E-65	8.8E-65	8.8E-65	2E-63	7.8E-62
UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:060223 SSX3 - HOMO SAPIENS (HUMAN), 188 aa.	Human Gene Similar to SPTREMBL- ACC:060223 SSX3 - HOMO SAPIENS (HUMAN), 188 aa.	Human Gene Similar to SPTREMBL- ACC:O60223 SSX3 - HOMO SAPIENS (HUMAN), 188 aa.	Human Gene Similar to SPTREMBL- ACC:O60223 SSX3 - HOMO SAPIENS (HUMAN), 188 aa.	Human Gene Similar to SPTREMBL- ACC:060223 SSX3 - HOMO SAPIENS (HUMAN), 188 aa.	Human Gene Similar to SPTREMBL- ACC:O14716 DNAJ PROTEIN - HOMO SAPIENS (HUMAN), 135 aa.	Human Gene Similar to SWISSNEW-ACC:095298 NADH-UBIQUINONE OXIDOREDUCTASE SUBUNIT B14.5B (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-B14.5B) (CI-B14.5B) - Homo sapiens (Human), 119 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	SIFIED
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149 CAATATGTTAGT TCTGGGCAATTA T[I/C]CTGCAAAT TCTGCCAGATAA	150 AATATGTTAGTT CTGGGCAATTAT T[C/T]TGCAAATT CTGCCAGATAAT TAAAG	30 TTGTTGTTCTCA AGCTTTTCGCCT A[C/T]ATTTTAGA CTAACCCTGCTT ATTCC	TTTTCGCCTACA TTTTAGACTAAC C[C/T]TGCTTATT CCTGTGAATCAA GTGGT	65 TAACCCTGCTTA TTCCTGTGAATC A[A/C]GTGGTGA TCTTCTGCAGCT TGGAAT	437 GCÁTTTGCTGCT TGTGCTTGATTT T[G/A]TTTGGCTC AATCCCTTCCTG GCAGC	263 AAACATGTTCCA TCAAATTCAGAA A[C/gap]AGCAGG TATCAGTGAAAC TGGAGCA
149	150	30	45	65	437	263
296 cg43085556	297 cg43085556	298 cg43085556	299 cg43085556	300 cg43085556	301 cg43920089	302 cg43950850
296	297	298	299	300	301	302

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7.8E-62	1.7E-59	3.5E-59	4.3E-59	4.3E-59	4.30E-59	3.10E-58
UNCLAS Human Gene Similar to SWISSNEW-SIFIED ACC:095298 NADH-UBIQUINONE OXIDOREDUCTASE SUBUNIT B14.5B (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-B14.5B) (CI-B14.5B) - Homo sapiens (Human), 119 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:033196 HYPOTHETICAL 32.9 KD PROTEIN - MYCOBACTERIUM TUBERCULOSIS, 307 aa.	Human Gene Similar to SPTREMBL-ACC:035946 HYPOTHETICAL 14.9 KD PROTEIN - RATTUS NORVEGICUS (RAT), 137 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q12773 GUANINE NUCLEOTIDE REGULATORY PROTEIN - HOMO SAPIENS (HUMAN), 460 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q12773 GUANINE NUCLEOTIDE REGULATORY PROTEIN - HOMO SAPIENS (HUMAN), 460 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q12773 GUANINE NUCLEOTIDE REGULATORY PROTEIN - HOMO SAPIENS (HUMAN), 460 aa.	UNCLAS Human Gene Similar to SWISSPROT-SIFIED ACC:035414 STATHMIN-LIKE PROTEIN B3 (RB3) - Rattus norvegicus (Rat), 189 aa.
UNCLAS	SIFIED	SIFIED	UNCLAS	UNCLAS	SIFIED	UNCLAS
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736 AGGAAAACCAC GACGACCACTAC CC[G/C]GGCCTA AGCGGTCAGCTT TCTCCTC	1012 CATCCGCGCTG ACGGCAGTCAC CGG[T/C]GAGAC CGGCGCCGGAA AGACCATGG	984 GACGCTCGCTG TCCCCGAGGGC CCG[gap/C]TGCG CCGCCTCGTGG GTACGAATAC	546 GCTTCTGTCAGA CGTTACTTTCAC C[G/A]TGCCTGC TGTTTCCACAGG AAGAGT	R CGTTACTTTCAC CGTGCCTGCTGT T[T/C]CCACAGG AAGAGTCTGTCT GTTCCA	755 ACCCCAGCTTGC CCGGCAGCACA CA[A/G]AACTGTT TCTTTGGCTTGA CGAATA	222 ACACCACTGGTA CTCACACCCCCT C[T/C]GGCTGGG TTCTCTGGTGCG CCCTGC
73	101	86	5	558	75	52
303 cg43950850	304 cg44128084	305 cg43976473	306 cg44924858	307 cg44924858	308 cg44924858	309 cg43961591
303	304	305	306	307	308	306

15	15	19				
2.9		65	<u> </u>	25	21	
4.20E-57	4.20E-57	2.30E-53	4.20E-53	4.80E-52	1.90E-51	2.60E-51
Human Gene Similar to TREMBLNEW-ACC:AAD29804 F26H11.12 PROTEIN - ARABIDOPSIS THALIANA (MOUSE-EAR CRESS), 323 aa.	Human Gene Similar to TREMBLNEW- ACC:AAD29804 F26H11.12 PROTEIN - ARABIDOPSIS THALIANA (MOUSE- EAR CRESS), 323 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB43298 HYPOTHETICAL 13.8 KD PROTEIN - HOMO SAPIENS (HUMAN), 118 aa (fragment).	Human Gene Similar to SWISSPROT-ACC:P31639 SODIUM/GLUCOSE COTRANSPORTER 2 (NA(+)/GLUCOSE COTRANSPORTER 2) (LOW AFFINITY SODIUM-GLUCOSE COTRANSPORTER) - Homo sapiens (Human), 672 aa.	Human Gene Similar to TREMBLNEW- ACC:AAD34077 CGI-82 PROTEIN - HOMO SAPIENS (HUMAN), 318 aa.	Human Gene Similar to SPTREMBL- ACC:O15019 KIAA0301 - HOMO SAPIENS (HUMAN), 2047 aa (fragment).	Human Gene Similar to SPTREMBL- ACC:015121 PUTATIVE FATTY ACID DESATURASE MLD - HOMO SAPIENS (HUMAN), 323 aa.
UNCLAS	SIFIED	SIFIED	SIFIED	UNCLAS	UNCLAS	UNCLAS
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528 CTGCATATGTTT GCAGTTTTCCAT C[A/G]ACTTCTTC ATAAACAAACAA ACATT	574 ACATTTCTAGA AACCAAAATATG T[A/G]GTGGCCC AAAGGAGCTCTT AAGCAA	198 GTTTGATCCTCA GCCAGGACGCA CA[G/A]GCCCTA CAGGATCCCAGC CCTCCAA	502 AACGGCTTTAAA CACAAGCTCAG GG[G/gap]CTTGG GGTTTATCCCGA GGGCACAG	342 TATTTTTCATTGT ACTTATTATTCA[T/C]TATACTTACT ATATATTTAAA AC	AAACAACAAAAT AACCAAACATAA A[C/T]CAACTAAT GCTACACAGAAT GTGAT	CGGCCGCGGC G/T]CGGAACGG CGCCTCCCGCC CCACCA
528	574	198	502	342	77	1
310 cg43924285	311 cg43924285	312 cg43958224	313 cg43971060	314 cg44927952	315 cg19885484	316 cg42307356
310	311	312	313	314	315	316

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5.00E-51	1.40E-50	1.40E-50	1.40E-50	8.7e-312	8.7e-312	9.1e-313
UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:CAB43363 HYPOTHETICAL 23.0 KD PROTEIN - HOMO SAPIENS (HUMAN), 204 aa.	Human Gene Similar to SPTREMBL-ACC:Q92565 MYELOBLAST KIAA0277 - HOMO SAPIENS (HUMAN), 580 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q92565 MYELOBLAST KIAA0277 - HOMO SAPIENS (HUMAN), 580 aa.	Human Gene Similar to SPTREMBL-ACC:Q92565 MYELOBLAST KIAA0277 - HOMO SAPIENS (HUMAN), 580 aa.	Human Gene SPTREMBL-ACC:O75148 KIAA0658 PROTEIN -HOMO SAPIENS (HUMAN), 589 aa (fragment).	Human Gene SPTREMBL-ACC:O75148 KIAA0658 PROTEIN -HOMO SAPIENS (HUMAN), 589 aa (fragment).	Human Gene SWISSNEW- ACC:P14222 PERFORIN 1 PRECURSOR (P1) (LYMPHOCYTE PORE FORMING PROTEIN) (PFP) (CYTOLYSIN) - Homo sapiens (Human), 555 aa.
UNCLAS	UNCLAS	SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING	SILENT- NONCODING
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947 TGGGAGGCCTG GTTGCCCCTCCC GG[C/T]GTGCTG GGACACTCTGG GTTCCTGC	TTGAGCTCTCCT ACAAGCTGGAG GC[A/C]AACAGT CAGTGAGAGGG GGGGGGCC	612 AGCTCTCCTACA AGCTGGAGGCA AA[C/T]AGTCAGT GAGAGCGGGGG GGCCAGT	625 GCTGGAGGCAA ACAGTCAGTGAG AG[C/T]GGGGGG GCCAGTCAGAC CCGACCAA	980 CAGCCTCATAGC CACACACACACA C[A/gap]CGTACC ACACACGCACACACACACACACACACACACACACAC	1009 ACCACACACGCA CACACACACAC C[A/gap]CTTTGT GGCTCAAGTGC AGGCCACA	3074 CAACACTTTGGG AGGCCGAGGCA GG[T/C]GGATCA CCTGAGGTCAG GAGTTCGA
947	609	612	625	086	1009	3074
317 cg44005017	318 cg43329819	319 cg43329819	320 cg43329819	321 cg44015618	322 cg44015618	323 cg40361678
317	318	319	320	321	322	323

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9.16-313	9.16-313	1.6E-117	1.7E-175	5.6E-108	5.60E-108
Human Gene SWISSNEW- ACC:P14222 PERFORIN 1 PRECURSOR (P1) (LYMPHOCYTE PORE FORMING PROTEIN) (PFP) (CYTOLYSIN) - Homo sapiens (Human), 555 aa.		Human Gene Homologous to SPTREMBL-ID:Q62627 CLONE PAR- 4 INDUCED BY EFFECTORS OF APOPTOSIS - RATTUS NORVEGICUS (RAT), 332 aa.	ATPase_ Human Gene SPTREMBL-ID:Q29466 associate VACUOLAR H+-ATPASE SUBUNIT (EC 3.6.1.34) (H(+)-TRANSPORTING ATP SYNTHASE) (H(+)-TRANSPORTING ATPASE) (MITOCHONDRIAL ATPASE) (CHLOROPLAST ATPASE) (COUPLING FACTORS (F(O), F(1) AND CF(1))) - BOS TAURUS (BOVINE), 838 aa.	ATPase_ Human Gene Homologous to associate SPTREMBL-ID:Q22494 SIMILAR TOS. CEREVISIAE VACUOLAR H(+)-ATPASE 54 KD SUBUNIT -CAENORHABDITIS ELEGANS, 470 aa.	Human Gene Homologous to SPTREMBL-ID:Q22494 SIMILAR TOS. CEREVISIAE VACUOLAR H(+)- ATPASE 54 KD SUBUNIT - CAENORHABDITIS ELEGANS, 470 aa.
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3144 GTGAAACCCCGT CTCTACTAAAAA T[A/T]CAAAAATT AGCCGGGCATG GTGGCG	CTAAAAATACAA AAATTAGCCGGG C[A/G]TGGTGGC GGATGCCTGTAA TCCCAG	1287 AAAATAAAACTC TTTTGAAAGTTG T[G/T]GGTCAGC TGACCAGGTAGA GGATTC	413 CAAAGGCGGCA AAGATGGGGAC CAG[C/T]ACCAC AGCGCCACGC CCACCTCCC	749 CATTCTCTCC AAAATTTCTCAG A[T/C]TTGTGCAC AGGACTCCATTC CAACC	761 AAAATTTCTCAG ATTTGTGCACAG G(A/G)CTCCATTC CAACCTTCCAGA
3144	3161	1287	413 E	749	761
324 cg40361678	325 cg40361678	326 cg43930957	327 cg43300636	328 cg43967912	329 cg43967912
324	325	326	327	328	329

8	=	<u>(6</u>	<u>g</u>	₆ (c)	3 (6)
		6 (6q16)	1 (1p34)	9 (9q34.3)	5 (5q13.3)
5.60E-108	9.40E-58	7.90E-77	1.30E-73	-104	2.60E-172
5.60	9.40	7.90	1.30	1.40E-104	2.60
ATPase_ Human Gene Homologous to associate SPTREMBL-ID:Q22494 SIMILAR TOS. CEREVISIAE VACUOLAR H(+)-ATPASE 54 KD SUBUNIT - CAENORHABDITIS ELEGANS, 470 aa.	ATPase_ Human Gene Similar to SPTREMBL-associate ID:Q15332 GAMMA SUBUNIT OF d SODIUM POTASSIUM ATPASE LIKE-HOMO SAPIENS (HUMAN), 126 aa.	Human Gene Similar to SWISSPROT- ID:Q08345 EPITHELIAL DISCOIDIN DOMAIN RECEPTOR 1 PRECURSOR (EC 2.7.1.112) (TYROSINE-PROTEIN KINASE CAK) (CELL ADHESION KINASE) (TYROSINE KINASE DDR) (DISCOIDIN RECEPTOR TYROSINE KINASE) (TRK E) (PROTEIN- TYROSINE KINASE RTK 6) - HOMO SAPIENS (HUMAN), 913 aa.	Human Gene Similar to SWISSPROT-ID:Q07092 COLLAGEN ALPHA 1(XVI) CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 1603 aa.		Human Gene SWISSPROT- ID:P51946 CYCLIN H (MO15- ASSOCIATED PROTEIN) (P37) (P34) HOMO SAPIENS (HUMAN), 323 aa.
ATPase_ associate d	ATPase_associate	cadherin	collagen	complem ent	cyclin
SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING
Arg	Leu	Pro	Ser	Thr	Ala
Arg	nen	Po	. Jeg	Thr	Ala
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773 ATTTGTGCACAG C GACTCCATTCCA A[C/T]CTTCCAGA TTTAAGTTCTGA ACTGT	371 AGTGGGTGGCA C CCGCCGAGGCT GCT[G/A]TTACG GCTCATCTTCAT TGATTTGC	352 ACACGCCCAGC TAGCCGAATGATG TILT/GJGGGGTCCT TGAGCCTCGACA TGATCT	2634 AGCACTCCCCTGT GCTCACCCTTCT C[T/C]CCTCGTG GTCCTTTTCAC CTGGTG	CTGTGCACGTG GTTGTCGCTGAG AC[C/T]GACTACC AGAGTTTCGCTG TCCTGT	286 GCAAATTCAGAT C GCAAAGCCGTG GC[C/T]AACGGG AAGGTTCTTCCG AATGATC
773	371	352	2634	480	286
330 cg43967912	331 cg43132502	332 cg44924856	333 cg43991318	334 cg41553795	335 cg43973728
330	331	332	333	334	335

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0.00E+00	0.00E+00	0.00E+00
0.00	0.00	00:0
dehydrog Human Gene SWISSPROT- enase ID:Q16134 ELECTRON TRANSFER FLAVOPROTEIN-UBIQUINONE OXIDOREDUCTASE PRECURSOR (EC 1.5.5.1) (ETF-Q0) (ETF- UBIQUINONE OXIDOREDUCTASE) (ETF DEHYDROGENASE) (ELECTRON-TRANSFERRING- FLAVOPROTEIN DEHYDROGENASE) - HOMO SAPIENS (HUMAN), 617 aa.	dehydrog Human Gene SWISSPROT- enase ID:Q16134 ELECTRON TRANSFER FLAVOPROTEIN-UBIQUINONE OXIDOREDUCTASE PRECURSOR (EC 1.5.5.1) (ETF-Q0) (ETF- UBIQUINONE OXIDOREDUCTASE) (ETF DEHYDROGENASE) (ELECTRON-TRANSFERRING- FLAVOPROTEIN DEHYDROGENASE) - HOMO SAPIENS (HUMAN), 617 aa.	dehydrog Human Gene SWISSPROT- enase ID:Q16134 ELECTRON TRANSFER FLAVOPROTEIN-UBIQUINONE OXIDOREDUCTASE PRECURSOR (EC 1.5.5.1) (ETF-QO) (ETF- UBIQUINONE OXIDOREDUCTASE) (ETF DEHYDROGENASE) (ELECTRON-TRANSFERRING- FLAVOPROTEIN DEHYDROGENASE) - HOMO SAPIENS (HUMAN), 617 aa.
dehydrog	dehydrog enase	dehydrog enase
SILENT- CODING	SILENT	SILENT.
<u> </u>	Olu Glu	\sqr
ž S	gin	Val
O	<u>ن</u>	Ø
	A	V
1413 TCCAATCAAAGA CAACAGGACTCC AT/C]GTAACTGA ATATGAGGACAA TTTGA	1422 AGACAACAGGA / CTCCATGTAACT GA[A/G]TATGAG GACAATTTGAAG AAATCAT	1452 AGGACAATTIGA / AGAAATCATGGG T[A/G]TGGAAAG AGCTATATTCTG TTAGAA
1413	1422	1452
336 cg43312829	337 cg43312829	338 cg43312829
336	337	3338

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0.00E+00	0.00E+00	0.00E+00	1.70E-113
0.0	0.0	00.0	1.70
dehydrog Human Gene SWISSPROT- enase ID:Q16134 ELECTRON TRANSFER FLAVOPROTEIN-UBIQUINONE OXIDOREDUCTASE PRECURSOR (EC 1.5.5.1) (ETF-QO) (ETF- UBIQUINONE OXIDOREDUCTASE) (ETF DEHYDROGENASE) (ELECTRON-TRANSFERRING- FLAVOPROTEIN DEHYDROGENASE) - HOMO SAPIENS (HUMAN), 617 aa.	dehydrog Human Gene SWISSPROT- enase ID:Q16134 ELECTRON TRANSFER FLAVOPROTEIN-UBIQUINONE OXIDOREDUCTASE PRECURSOR (EC 1.5.5.1) (ETF-QO) (ETF- UBIQUINONE OXIDOREDUCTASE) (ETF DEHYDROGENASE) (ELECTRON-TRANSFERRING- FLAVOPROTEIN DEHYDROGENASE) - HOMO SAPIENS (HUMAN), 617 aa.	dehydrog Human Gene SWISSPROT- enase ID:Q16134 ELECTRON TRANSFER FLAVOPROTEIN-UBIQUINONE OXIDOREDUCTASE PRECURSOR (EC 1.5.5.1) (ETF-QO) (ETF- UBIQUINONE OXIDOREDUCTASE) (ETF DEHYDROGENASE) (ELECTRON-TRANSFERRING- FLAVOPROTEIN DEHYDROGENASE) - HOMO SAPIENS (HUMAN), 617 aa.	dehydrog Human Gene Homologous to enase SPTREMBL-ID:O00217 MITOCHONDRIAL NADH DEHYDROGENASE-UBIQUINONE FE-S PROTEIN 8, 23 KDA SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 210 aa.
dehydrog enase	dehydrog enase	dehydrog enase	dehydrog enase
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING
\alpha	<u>6</u>	Asp	Ser
\alpha	Pro	Asp	Ser
O	∢	O	∢
	ග		O
1473 GGGTATGGAAA 1 GAGCTATATTCT GT[T/C]AGAAATA TAGGCCATCCT GCCACG	1569 ACTGGATATTGA (GAGGAATGGAG CC[G/A]TGGACT CTAAAACATAAA GGCTCTG	TTGAACGGCTCA TAGCCAGGCCAAGGAT/CJTGTACACCCATTGAGTATCCCAAAACCAAAAC	652 TCGAGGGCCCC CAACTTTGAGTTC TC[C/A]ACGGAG ACCATGAGGAG ACCATGAGGA GCTGCTGT
1473	1569	1623	652
339 cg43312829	340 cg43312829	341 cg43312829	342 cg43307992
336	340	341	342

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		·	*		
1.80E-109	2.10E-76	2.10E-76	2.10E-76	2.10E-76	2.10E-76
dehydrog Human Gene Homologous to enase SPTREMBL-ID:Q16797 NADP- DEPENDENT MALIC ENZYME (EC 1.1.1.40) (MALATE DEHYDROGENASE (OXALOACETATE DECARBOXYLATING) (NADP+)) (PYRUVIC-MALIC CARBOXYLASE)- HOMO SAPIENS (HUMAN), 572 aa.	dehydrog Human Gene Similar to SWISSPROT- enase ID:P46703 ACYL-COA DEHYDROGENASE (EC 1.3.99) - MYCOBACTERIUM LEPRAE, 389 aa.	dehydrog Human Gene Similar to SWISSPROT- enase ID:P46703 ACYL-COA DEHYDROGENASE (EC 1.3.99) - MYCOBACTERIUM LEPRAE, 389 aa.	dehydrog Human Gene Similar to SWISSPROT- enase ID:P46703 ACYL-COA DEHYDROGENASE (EC 1.3.99) - MYCOBACTERIUM LEPRAE, 389 aa.	dehydrog Human Gene Similar to SWISSPROT- enase ID:P46703 ACYL-COA DEHYDROGENASE (EC 1.3.99) - MYCOBACTERIUM LEPRAE, 389 aa.	dehydrog Human Gene Similar to SWISSPROT- enase ID:P46703 ACYL-COA DEHYDROGENASE (EC 1.3.99) - MYCOBACTERIUM LEPRAE, 389 aa.
dehydrog enase	dehydrog enase	dehydrog enase	dehydrog enase	dehydrog enase	dehydrog enase
SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING
Val	ne _	Asn	\ \ \	Leu	Val
 Na	ren	Asn	 	Leu	\ √a
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965 TGGCTGTGGGC TTCACCAGCCTC ACIC/TJACCTCCT CCAGGGAGTTG ACTTCAG	318 ATGCTGGATCAG ATCCAGCTGCAC T[A/T]AAGTGTCG AGCCGACGAAG ATGGGG	360 AAGATGGGGAC AGTTTCGTCCTG AA[C/T]GGCGTC AAGGCTTGGGT CACGGAGG	366 GGGACAGTTTC GTCCTGAACGG CGT[C/T]AAGGC TTGGGTCACGG AGGCTGGCG	613 TCGAGGGCACG GTCTGAGTGTTG CT[T/C]TGGGTAC GCTTGACAACTC TCGTGT	660 GTGTCTCGATTG CTGCTCAAGCAG T[G/A]GGAATTG CCCAGGGAGCT TTAGACA
965	318	360	366	613	099
343 cg43969759	344 cg39523614	345 cg39523614	346 cg39523614	347 cg39523614	348 cg39523614
343	344	345	346	347	348

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2.40E-52	2.40E-52	2.40E-52	2.40E-52	2.10E-115
dehydrog Human Gene Similar to SWISSPROT- enase ID:P04636 MALATE DEHYDROGENASE, MITOCHONDRIAL PRECURSOR (EC 1.1.1.37) - RATTUS NORVEGICUS (RAT), 338 aa.	dehydrog Human Gene Similar to SWISSPROT- enase ID:P04636 MALATE DEHYDROGENASE, MITOCHONDRIAL PRECURSOR (EC 1.1.1.37) - RATTUS NORVEGICUS (RAT), 338 aa.	dehydrog Human Gene Similar to SWISSPROT- enase ID:P04636 MALATE DEHYDROGENASE, MITOCHONDRIAL PRECURSOR (EC 1.1.1.37) - RATTUS NORVEGICUS (RAT), 338 aa.	dehydrog Human Gene Similar to SWISSPROT- enase ID:P04636 MALATE DEHYDROGENASE, MITOCHONDRIAL PRECURSOR (EC 1.1.1.37) - RATTUS NORVEGICUS (RAT), 338 aa.	Human Gene Homologous to SWISSPROT-ID:P48722 OSMOTIC STRESS PROTEIN 94 (HEAT SHOCK 70-RELATED PROTEIN APG-1) - MUS MUSCULUS (MOUSE), 838 aa.
dehydrog enase	dehydrog enase	dehydrog enase	dehydrog enase	ude
SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING
Val	Ala	Glu	Lys	Thr
Val	Ala	Glu	Lys	Thr
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207 AGGCTCACACTC C ACTTCATGTTCT T[C/G]ACAAAGTC CTCGCCTTTCTT GATGG	TGATGGAGGCTT TCAGCTCAGGG AT[G/A]GCCTCG GCAATCATTTTC TCCTCAA	270 CAGGGATGGCC TCGGCAATCATT TT[C/T]TCCTCAA AAGGAGTGATTT TGCCAA	288 TCATTITCTCCT CAAAAGGAGTGA T[T/C]TTGCCAAT GCCTAGGTTCTT CTCCA	ISSS ATTTAGTATGCT GTGAGCTGTCTT T[I/G]GTTGAATC TGATTTAGTTTC AGTTC
207	252	270	288	1535
349 cg42717491	350 cg42717491	351 cg42717491	352 cg42717491	353 cg42711596
349	350	351	352	353

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	+	6	<u> </u>	4
3.30E-60	1.00E-234	2.60E-78	2.60E-60	2.90E-54
3.30	.00E	2.60	2.60	2.90
		1	111	
Human Gene Similar to SWISSNEW-ID:Q23917 3',5'-CYCLIC-NUCLEOTIDE PHOSPHODIESTERASE REGA (EC 3.1.4.17) (PDEASE REGA) - DICTYOSTELIUM DISCOIDEUM (SLIME MOLD), 793 aa. pcls:SWISSPROT-ID:Q23917 3',5'-CYCLIC-NUCLEOTIDE PHOSPHODIESTERASE REGA (EC 3.1.4.17) (PDEASE REGA) - DICTYOSTELIUM DISCOIDEUM (SLIME MOLD), 793 aa.	Human Gene SPTREMBL-ID:Q61003 T CELL SURFACE GLYCOPROTEIN CD6 - MUS MUSCULUS (MOUSE), 665 aa.	ROT IL S	Human Gene Similar to SPTREMBL-ID:Q14245 ERYTHROID MEMBRANE PROTEIN 4.1 - HOMO SAPIENS (HUMAN), 641 aa.	Human Gene Similar to SWISSPROT- ID:P25888 PUTATIVE ATP- DEPENDENT RNA HELICASE RHLE ESCHERICHIA COLI, 454 aa.
SSNI GA 3917 EUM	POS PROT SUS	SSPI OMA TTU a.	REM MBF ENS	SSPI SE R
SWIS - (A) - OIDE (A) - (A) -	COP (MC	XISONIS XISONIS Bases	SPTI ME	SWISTP-
AASI REG REG RISC RISC DE T-ID DE REG RISC RISC RISC RISC RISC RISC RISC RISC	EMB 3LY LUS	ERO EIN FI), 13	r to (r to (/E A /E A HEL .1, 45
imila -CYC STEF STEF NM D 193 PRO EOTI STEF NM D 193 NM D	PTR CE (SCU	imila CD P ROT (RA)	imila THF HON aa.	mila ATIV NA COL
Human Gene Similar to SWISSNEW-ID:Q23917 3,5-CYCLIC-NUCLEOTIDE PHOSPHODIESTERASE REGA (EC 3.1.4.17) (PDEASE REGA) - DICTYOSTELIUM DISCOIDEUM (SLIME MOLD), 793 aa. pcls:SWISSPROT-ID:Q23917 3',5 CYCLIC-NUCLEOTIDE PHOSPHODIESTERASE REGA (EC 3.1.4.17) (PDEASE REGA) - DICTYOSTELIUM DISCOIDEUM (SLIME MOLD), 793 aa.	Human Gene SPTREMBL-ID:Q6100 T CELL SURFACE GLYCOPROTEI CD6 - MUS MUSCULUS (MOUSE), 665 aa.	Human Gene Similar to SWISSPRI ID:Q07066 22 KD PEROXISOMAL MEMBRANE PROTEIN - RATTUS NORVEGICUS (RAT), 193 aa.	Human Gene Similar to SPTREM ID:Q14245 ERYTHROID MEMBF PROTEIN 4.1 - HOMO SAPIENS (HUMAN), 641 aa.	Human Gene Similar to SWIS ID:P25888 PUTATIVE ATP- DEPENDENT RNA HELICAS ESCHERICHIA COLI, 454 aa.
9917 9917 9917 9917 9917 9917 9917 9917	Gel L SU MUS	7 Gel 7066 RAN EGIC	1 Ge 1245 EIN 4 NN),	Ge 1 Ge 1 Ge 1 Ge 1 Ge 1 Ge 1 Ge 1 Ge 1
Human Gene ID:0239173;4 NUCLEOTIDE PHOSPHODIE 3.1.4.17) (PDE IO:TYOSTEL SCIME MOLD aa. pcis:SWIS CYCLIC-NUCI PHOSPHODIE 3.1.4.17) (PDE DICTYOSTEL (SLIME MOLD	Human T CELL CD6 - N 665 aa	OO7	1014 1014 1016 1016	Imar P25 PEPEP SCHI
HONTER OF SERVICES	glycoprot Human Gene SPTREMBL-ID:Q61003 ein T CELL SURFACE GLYCOPROTEIN CD6 - MUS MUSCULUS (MOUSE), 665 aa.	glycoprot Human Gene Similar to SWISSPROTein ID:Q07066 22 KD PEROXISOMAL MEMBRANE PROTEIN - RATTUS NORVEGICUS (RAT), 193 aa.	glycoprot Human Gene Similar to SPTREMBL-ein ID:Q14245 ERYTHROID MEMBRAN PROTEIN 4.1 - HOMO SAPIENS (HUMAN), 641 aa.	
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este	glyc	glyc ein	glyc ein	heli
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CODING	SILENT- CODING	SILENT- CODING	SILENT.	SILENT- CODING
<u>w</u> o	<u> </u>	<u> </u>	<u>ග ර</u>	<u>ග ර</u>
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Al	Th	GI _y	Val	Ser
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Ala	Тh	GI _Y	N	Ser
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AGAAGTCAGAAG GCCTTCCTGTGG C[A/C]CCGTTCAT GGACCGAGACA AAGTGA	CA CG CG	200 300 500 100 100 100 100 100 100 100 100 1	TAT YAA YAA	GC SATT NGT AAA
CTG GTT AGA	GAT GAT TGG GGA TGG	ACG	CAC CAC	AAA NTAC GAA TAG
17.00 00.00 0.00 0.00 0.00 0.00 0.00 0.0	366 170 36A	AGC (G/C 3GC)	316 101(4)AC 1661	TGA CTA AJGA AAA:
AGAAGTCAGAA(GCCTTCCTGTG C[A/C]CCGTTCA GGACCGAGACA AAGTGA	AGTGGGGATCA GTGTGCGATGA CAC[T/C]TGGGA CCTGGAGGACG CCCACGTGG	GCGCCGCCGCGCGCGCGCGCGCGCGCGCGCGCGCGGCGG	CTGGTGTGATCT CTGTCTTTAT G[G/A]ACCACTA CTTTGGTCACTG ACATGT	GGCTGAAAAGC ATATCTATACATT C[G/A]GAGAAGT CGCAAATAGAAA GGAAAA
1557 AGAAGTCAGAAG GCCTTCCTGTGG C[A/C]CCGTTCAT GGACCGAGACA AAGTGA	687 AGTGGGGATCA GTGTGCGATGA CAC[T/C]TGGGA CCTGGAGGACG CCCACGTGG	860 GCGCCCGCCGCGCGCGCGCGCGCGCGCGCGCGCGCGCCGCCGCCGCCGCAGGCCGCAGGCGCGGAGGA	258	816 GGCTGAAAAGC ATATCTATACAT C[G/A]GAGAAGT CGCAAATAGAA GGAAAA
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450	366	034	227	642
3319	1029	2876	3976	3916
354 cg43319420	355 cg41029366	356 cg42876034	357 cg43976227	358 cg43916642
354	355	356	357	358

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interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q16666 IF116=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).	interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q16666 IF16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).	interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q1666 IF16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).
interferon	interferon	interferon
SILENT- CODING	SILENT- CODING	SILENT- CODING
Giu	Leu	Ser
Giu	Leu	Ser
o ·	g	4
	T	o
2320 AACCAGCATCAC CTCGGAACTTT C[T/C]TCCATCAA GTCAGCAATCTG AATTT	2370 TTGTCATACTCT A TCTCTCATTTTTA [A/G]ATTAAGTTT TAAATCGTTGCT CAGT	2389 TTTTTAAATTAAG (TTTTAAATCGTT[G/A]CTCAGTAAG GACTTAACCATT CTAA
ଷ	83	53
359 cg43925670	360 cg43925670	361 cg43925670
328	360	361

-		9		8 🖹
				20 (20q11)
0.00E+00	3.00E-123	0.00E+00	0.00E+00	9.20E-289
	3.00	0.0	0.0	9.20
interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q16666 IFI16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).	isomeras Human Gene Homologous to SPTREMBL-ID:Q13907 HOMOLOG OF YEAST IPP ISOMERASE - HOMO SAPIENS (HUMAN), 228 aa.	Human Gene SPTREMBL-ID:Q60680 CONSERVED HELIX-LOOP-HELIX UBIQUITOUS KINASE - MUS MUSCULUS (MOUSE), 745 aa.	Human Gene TREMBLNEW- ID:G2853031 TOUSLED-LIKE KINASE - MUS MUSCULUS (MOUSE), 717 aa.	Human Gene SWISSPROT- ID:P08631 TYROSINE-PROTEIN KINASE HCK (EC 2.7.1.112) (P59- HCK AND P60-HCK) (HEMOPOIETIC CELL KINASE) - HOMO SAPIENS (HUMAN), 526 aa.
interferon	isomeras e	kinase	kinase	kinase
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING
ren .	<u>e</u>	Gly	Cys	Ser
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2446 AATCATTGATGA CCTCTAATCCTT T[T/C]AGTAGAAC AATGTTCTTGTA TTTTT	1913 TTTTATTGTCATT (TTCATCAATAAG[G/AJATACACATC TCTGCCAGGAGT TGAA	2144 CATGTGTGGTAA (CTCCTCAAGATG G[G/C]GAGACGT TAGCACAAATGA TAGAAG	2072 TTGGTGGTTCTT IN TOCCAACCACAA AIAGICACTCCG GTGGTAAATACC AATAAG	748 GGGGCTTCTACA C TATCCCCCCGAA G[C/T]ACCTTCAG CACTCTGCAGGA GCTGG
2446	1913	2144	2072	748
362 cg43925670	363 cg44004587	364 cg43257400	365 cg43931272	366 cg42665067
9°C	98	96 	36.	98

0	6	6	6	
	-	-	-	÷
159	159	159	158	5.51
3.60E-159	3.60E-159	3.60E-159	6.80E-158	2.70E-51
			0	
Human Gene SWISSPROT- ID:P49615 CELL DIVISION PROTEIN KINASE 5 (EC 2.7.1) (TAU PROTEIN KINASE II CATALYTIC SUBUNIT) (TPKII CATALYTIC SUBUNIT) (KINASE PSSALRE) (CRK6) - MUS MUSCULUS (MOUSE), 292 aa.	Human Gene SWISSPROT- ID:P49615 CELL DIVISION PROTEIN KINASE 5 (EC 2.7.1) (TAU PROTEIN KINASE II CATALYTIC SUBUNIT) (TPKII CATALYTIC SUBUNIT) (KINASE PSSALRE) (CRK6) - MUS MUSCULUS (MOUSE), 292 aa.	Human Gene SWISSPROT- ID:P49615 CELL DIVISION PROTEIN KINASE 5 (EC 2.7.1) (TAU PROTEIN KINASE II CATALYTIC SUBUNIT) (TPKII CATALYTIC SUBUNIT) (KINASE PSSALRE) (CRK6) - MUS MUSCULUS (MOUSE), 292 aa.	Human Gene TREMBLNEW- ID:D1025880 ZIP-KINASE - HOMO SAPIENS (HUMAN), 454 aa.	Human Gene Similar to SWISSPROT-ID:P46546 GLUTAMATE 5-KINASE (EC 2.7.2.11) (GAMMA-GLUTAMYL KINASE) (GK) - CORYNEBACTERIUM GLUTAMICUM, 369 aa.
kinase	Kinase.	kinase	kinase	kinase
		_	_	_
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SILENT- CODING	SILENT	SILENT- CODING	SILENT- CODING	SILENT- CODING
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œln	TyT	<u>■</u>	Gly	Gly
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Glu	Ļ	<u>•</u>	<u>5</u>	QI _Y
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GAA GAT GAT A	AAC AGC	2000 ATG/ 3000	GAG GAT GAT	077 186 186 186 186 186 186 186 186 186 186
GCA GAA GAA GAA GAA	AAAAA AGG CAAG SC	7444(CTC,)]GT()	CAG VGG1 ACA1	GGG JCGJ SCAC
634 CGATGCAGAAAT ACGAGAAACTG GA[A/G]AAGATT GGGGAAGGCAC CTACGGAA	TGGAAAAGATTG GGGAAGGCACC TA[C/T]GGAACTG TGTTCAAGGCCA AAAACC	CCAAAAACCGG GAGACTCATGAG AT[C/T]GTGGCTC TGAAACGGGTG AGGCTGG	576 CGCTCAGGAGG ATATAGGTGATG AC[A/G]CCGATG CTCCACATGTCC GCCTCCA	407 GGGCGGCTTCA AGTTTCGTGGTC AT[G/A]CCGCCG GTTCCCACCCCC GAACCAG
24 O A Q Q O	655 T. 7. A.	697 Q Q A T A A	O A A D Q	0 4 4 Q Q
Φ	σ	9	. Oi	4
923	923	923	980	358
367 cg43982923	368 cg43982923	369 cg43982923	370 cg43919086	371 cg25143358
cg4	og 4	cg 4:	cg4,	cg2
367	368	369	370	371

				15 (15q25)	15 (15q25)
7.80E-86	7.80E-86	7.80E-86	7.80E-86	0.00E+00	0.00E+00
kinaseinh Human Gene Similar to SWISSPROT- ibitor ID:P42773 CYCLIN-DEPENDENT KINASE 6 INHIBITOR (P18-INK6) - HOMO SAPIENS (HUMAN), 168 aa.	kinaseinh Human Gene Similar to SWISSPROT- ibitor ID:P42773 CYCLIN-DEPENDENT KINASE 6 INHIBITOR (P18-INK6) - HOMO SAPIENS (HUMAN), 168 aa.	kinaseinh Human Gene Similar to SWISSPROT- ibitor ID:P42773 CYCLIN-DEPENDENT KINASE 6 INHIBITOR (P18-INK6) - HOMO SAPIENS (HUMAN), 168 aa.	kinaseinh Human Gene Similar to SWISSPROT- ibitor ID:P42773 CYCLIN-DEPENDENT KINASE 6 INHIBITOR (P18-INK6) - HOMO SAPIENS (HUMAN), 168 aa.	Human Gene SWISSPROT- ID:Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (TRKC TYROSINE KINASE) (GP145-TRKC) (TRK-C) - HOMO SAPIENS (HUMAN), 839 aa.	Human Gene SWISSPROT- ID:Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (TRKC TYROSINE KINASE) (GP145-TRKC) (TRK-C) - HOMO SAPIENS (HUMAN), 839 aa.
kinaseinh ibitor	kinaseinh ibitor	kinaseinh ibitor	kinaseinh ibitor	kinasere ceptor	kinasere ceptor
SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Thr	Arg	Olo	Phe	Ser	<u>⊜</u>
Ä L	Arg	ojo Ojo	Phe	Ser	⊕
<u> </u>	<	<u> -</u>	<u>o</u>	O	 -
U	O	O	⋖	F	O
514 GGTTCCGATGC CCCACATTGCTG GC[C/T]GTGTGC TTCACCAGGAAC TCCACCA	541 TGTGCTTCACCA GGAACTCCACCA C[C/A]CGGAGGT GGCCTTCTTTGG CAGCCA	595 GCAAGGGCAGG TTCCCTTCATTAT C[C/T]TCGATGTT AACATCAGCTTG	616 TATCCTCGATGT TAACATCAGCTT G[A/G]AACTCCA GCAAAGTCTGTA AAGTGT	410 CAGGGAACAGC AATGGGAACGC CAGIT/CJATCAAC ATCACGGACATC TCAAGGA	419 GCAATGGGAAC GCCAGTATCAAC AT[C/T]ACGGACA TCTCAAGGAATA TCACTT
514	541	295	616	410	419
372 cg43105476	373 cg43105476	374 cg43105476	375 cg43105476	376 cg43939695	377 cg43939695
372	373	374	375	376	377

15 (15q25)	15 (15q25)	15 (15q25)	15 (15q25)	15 (15q25)	15 (15q25)
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Human Gene SWISSPROT-ID:Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (TRKC TYROSINE KINASE) (GP145-TRKC) (TRK-C) -HOMO SAPIENS (HUMAN), 839 aa.	Human Gene SWISSPROT- ID:Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (TRKC TYROSINE KINASE) (GP145-TRKC) (TRK-C) - HOMO SAPIENS (HUMAN), 839 aa.	Human Gene SWISSPROT- ID:Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (TRKC TYROSINE KINASE) (GP145-TRKC) (TRK-C) - HOMO SAPIENS (HUMAN), 839 aa.	Human Gene SWISSPROT- ID:Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (TRKC TYROSINE KINASE) (GP145-TRKC) (TRK-C) - HOMO SAPIENS (HUMAN), 839 aa.	Human Gene SWISSPROT- ID:Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (TRKC TYROSINE KINASE) (GP145-TRKC) (TRK-C) - HOMO SAPIENS (HUMAN), 839 aa.	Human Gene SWISSPROT- ID:Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (TRKC TYROSINE KINASE) (GP145-TRKC) (TRK-C) - HOMO SAPIENS (HUMAN), 839 aa.
kinasere ceptor	kinasere ceptor	kinasere ceptor	kinasere ceptor	kinasere ceptor	kinasere ceptor
SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING
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Arg	ren	Thr	Asn	Th.	<u>ก</u>
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O	F	<u>ن</u>	O	O	4
467 CTTCCATACACA TAGAGAACTGGC G[C/A]AGTCTTCA CACGCTCAACG CCGTGG	473 TACACATAGAGA ACTGGCGCAGT CT[T/G]CACACG CTCAACGCCGT GGACATGG	479 TAGAGAACTGGC G GCAGTCTTCACA C[G/A]CTCAACG CCGTGGACATG GAGCTCT	485 ACTGGCGCAGT CTTCACACGCTC AA[C/T]GCCGTG GACATGGAGCT CTACACCG	509 ACGCCGTGGAC ATGGAGCTCTAC ACIC/GJGGACTT CAAAAGCTGACC ATCAAGA	518 ACATGGAGCTCT ACACCGGACTTC A(A/G)AAGCTGA CCATCAAGAACT CAGGAC
467	473	479	485	209	
378 cg43939695	379 cg43939695	380 cg43939695	381 cg43939695	382 cg43939695	383 cg43939695
378	379	380	381	382	383

12	9	N	N		[
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9.30E-280	0.00E+00	0.00E+00	0.00E+00	8.80E-51	8.80E-51
Human Gene SWISSPROT- ID:P36896 SERINE/THREONINE- PROTEIN KINASE RECEPTOR R2 PRECURSOR (EC 2.7.1.37) (SKR2) (ACTIVIN RECEPTOR-LIKE KINASE 4) (ALK-4) (ACTR-IB) - HOMO SAPIENS (HUMAN), 505 aa.	Human Gene SWISSNEW-ID:P33176 KINESIN HEAVY CHAIN (UBIQUITOUS KINESIN HEAVY CHAIN) (UKHC) - HOMO SAPIENS (HUMAN), 963 aa. pcls:SWISSPROT- ID:P33176 KINESIN HEAVY CHAIN (UBIQUITOUS KINESIN HEAVY CHAIN) (UKHC) - HOMO SAPIENS (HUMAN), 963 aa.	Human Gene SWISSPROT- ID:Q12756 KINESIN-LIKE PROTEIN KIF1A (AXONAL TRANSPORTER OF SYNAPTIC VESICLES) - HOMO SAPIENS (HUMAN), 1690 aa.	Human Gene SWISSPROT- ID:Q12756 KINESIN-LIKE PROTEIN KIF1A (AXONAL TRANSPORTER OF SYNAPTIC VESICLES) - HOMO SAPIENS (HUMAN), 1690 aa.	Human Gene Similar to SWISSPROT-ID:Q05090 KINESIN LIGHT CHAIN (KLC) - STRONGYLOCENTROTUS PURPURATUS (PURPLE SEA URCHIN), 686 aa.	Human Gene Similar to SWISSPROT-ID:Q05090 KINESIN LIGHT CHAIN (KLC) - STRONGYLOCENTROTUS PURPURATUS (PURPLE SEA URCHIN), 686 aa.
kinasere ceptor	kinesin	kinesin	kinesin	kinesin	kinesin
SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING
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Ġ Ż	Lys	Phe	Asn	Ala	Lys
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183 TGGTTTCCATTT C TCAATCTGGATG G[G/A]ATGGAGC ACCATGTGCGCA CCTGCA	2040 GTTCTTCTAGGG I CCTGTAAAACTT C[T/C]TTCACTTC TTCTTTAGAGGC ATCAT	TCCGGAAGTGG C AAGTGGTACCAG TT[C/T]ACGTCTC TGCGGGACCTG CTGTGGG	2398 CTCTGCGGGAC CCTGCTGTGGGGCCTGCTGTGCCATCTTGCCATCGAGGAGGAGGGAG	44 TCGGGCCCGAT GGACCCCAATGTGGGG/CJAAGACCTGGACTGGACTGGACTGGACTGGACTGGACTG	80 ACAACCTGGCTT A CCTGCTACCTGA A[A/G]CAGGGCA AGTACCAGGATG CAGAGA
183	2040	2368	2398	44	80
384 cg29023997	385 cg43942537	386 cg43975720	387 cg43975720	388 cg43311943	389 cg43311943
384	388	386	387	388	386

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261	173		214	00
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T- LIPASE ECURSOI IENS	·ID:P7945i NTIGEN H MOUSE),	ID:Q1547 IA SUBUN IN), 1836	W- OWTH P APIENS	Human Gene SWISSPROT. ID:Q01831 DNA-REPAIR PROTEIN COMPLEMENTING XP-C CELLS (XERODERMA PIGMENTOSUM GROUP C COMPLEMENTING PROTEIN) (P125) - HOMO SAPIENS (HUMAN), 939 aa.
SSPRO EATIC IN 2 PR IO SAP	REMBL LITY A ULUS (TEMBL L ALPH (HUMA	ABLNE VE GRC LE PC	SSPRO EPAIR (S XP-C SMENT EMENT
ie SWIS PANCR PROTEI - HOM 169 aa.	IE SPTE CIFIC IPATIBI MUSC	e SPTF TANNE PIENS	ie TREI 2 NER\ IDUCIB UE - HC 153 aa.	Human Gene SWISSPROT. ID:Q01831 DNA-REPAIR PROTE COMPLEMENTING XP-C CELLS (XERODERMA PIGMENTOSUM GROUP C COMPLEMENTING PROTEIN) (P125) - HOMO SAPI (HUMAN), 939 aa.
an Ger 54317 I ATED F 3.1.1.3) AAN), 4	an Ger E-SPE OCOM - MUS aa.	an Ger IUM CH MO SA	an Gen 121687 TOR-IN IOLOG //AN), 4	Human Gene SWI D:Q01831 DNA-F COMPLEMENTIN (XERODERMA PI GROUP C COMPI PROTEIN) (P125) (HUMAN), 939 aa.
Hum 10:Pt 18EL/ (FC (Huma MALI HIST YDB 1186	Hum SOD - HO	Hum ID:E1 HOM (HUN	Hum COM COM CARO PRO HUN
lipase	MHC	misc_cha nnel	ngf	nuclease Human Gene SWISSPROT ID:Q01831 DNA-REPAIR P COMPLEMENTING XP-C (XERODERMA PIGMENTC GROUP C COMPLEMENTI PROTEIN) (P125) - HOMO (HUMAN), 939 aa.
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CODING	ODING	ILENT-	CDING	SILENT- CODING
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AAAA TTCA TTCA ATAC	CCAG GCT GCT TCAT	GGGA CCTT TCAT	AGGA ATTTT AACC	TCCA BGCC BTGT ICAG
TTTG ATAT SAGTT TTCC,	AGCCC AGGAA AGJAA SGCCT	GGAG CACA TACA TCCC	CCTG STGG/ G/AJG/ CCAGA AAT	1283 AGTCGATGTCCA GCTTGCGGGCC AC[G/A]CGGTGT AGATTGGGCAG GTTCAGCT
ATCC TCTC [C/T]C TTAC AAAG	GGAA CTGC GCT[v GCCC GCGC	ATGT CCTT T[C/T] TGAG CAAG	ATGT GCAG ACG[(CCAA	AGTO GCTT AC[G/ AGAT GTTC
304	3848	955	1266	1283
18873	5885	9843	9972	16604
cg424£	cg4395	cg4401	cg449 <u>2</u>	395 cg44926604
391	392	393	394	395
	T Ser SILENT- CODING	Ser SILENT	304 ATCCTTTGAAAA C T Ser Silent Ilpase Human Gene SWISSPROT	1266 ATGCTTGAAAA C T Ser SILENT Ilpase Human Gene SWISSPROT

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2.60E-50	2.60E-50	2.60E-50
Human Gene Similar to SWISSNEW- ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE] - HOMO SAPIENS (HUMAN), 874 aa. pcls:SWISSPROT-ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE) - HOMO SAPIENS (HUMAN), 874 aa.	nuclease Human Gene Similar to SWISSNEW- ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN (CONTAINS: REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE] - HOMO SAPIENS (HUMAN), 874 aa.lpcis:SWISSPROT-ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE) - HOMO SAPIENS (HUMAN), 874 aa.	Human Gene Similar to SWISSNEW- ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE] - HOMO SAPIENS (HUMAN), 874 aa. [pcls:SWISSPROT-ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE) - HOMO SAPIENS (HUMAN), 874 aa.
nuclease	nuclease	nuclease
SILENT- CODING	SILENT- CODING	SILENT- CODING
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282 GCCAGTTAATAT (TGCCTAGTAATT T[C/T]TGATAATC ATTTAAGGTATG TAAGT	AAGGATACTTCC AAGGAGAGGAC AT[T/C]TGTACTT TTCAGGTGCAA TGATTA	405 AGGACATTTGTA A CTTTTCAGGTG CIA/TJATGATTAA ACCACTTAACTG TGCAT
282	387	405
396 cg38642684	397 cg38642684	398 cg38642684
968	397	398

	2 (2p12)			
	1		-	
2.60E-50	0.00E+00	5.30E-229	5.30E-229	1.30E-149
	,	5.3	5.3	1.3
nuclease Human Gene Similar to SWISSNEW- ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE] - HOMO SAPIENS (HUMAN), 874 aa.[pcls:SWISSPROT-ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE) - HOMO SAPIENS (HUMAN), 874 aa.	Human Gene SWISSPROT- ID:Q00918 LATENT TRANSFORMING GROWTH FACTOR BETA BINDING PROTEIN 1 PRECURSOR (TRANSFORMING GROWTH FACTOR BETA-1 BINDING PROTEIN 1) (TGF-BETA1-BP-1) (TRANSFORMING GROWTH FACTOR BETA-1 MASKING PROTEIN, LARGE SUBUNIT) - RATTUS NORVEGICUS (RAT), 1712 aa.	Human Gene SWISSPROT- ID:P12756 SKI-RELATED ONCOGENE SNOA - HOMO SAPIENS (HUMAN), 415 aa.	Human Gene SWISSPROT- ID:P12756 SKI-RELATED ONCOGENE SNOA - HOMO SAPIENS (HUMAN), 415 aa.	Human Gene Homologous to SWISSPROT-ID:P25689 URICASE (EC 1.7.3.3) (URATE OXIDASE) - PAPIO HAMADRYAS (HAMADRYAS BABOON), 303 aa.
nuclease	e e	e e	e e	oxidase
SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING
Геп	Ĭ.	Asp	Thr	Pro
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456 TCCTTATGACAG T AGGTATATAAAC T[I/C]AAAAGCAC TGGCTCCACTG GGGCTG	TTGAAGTAGCTC CTGAAGCTTCTA C[G/A]TCTAGTG CCAGCCAAGTG ATTGCTC	CCTGTGGGCTG TATTACATTAACT GA[T/C]GCACAA AGATTATGTAAT	1423 GTAATGCTTTAT T TGCGGCCACGA AC[T/G]TTTCCTC AAAATGGTAGCG TACTTC	546 TCAAGGACCAGT T TCACTACCCTCC C[T/C]GAGGTGA AGGACTGATGCT TTGCCA
456	2577	1384	1423	546
399 cg38642684	400 cg43919677	401 cg44005163	402 cg44005163	403 cg25334466
66E	400	401	402	403

12	0.1		15 26)	0	27)
	(1p36.1)		15 (15q26)		3 (3q27)
0.00E+00	3.20E-286	1.20E-64	0.00E+00	0.00E+00	0.00E+00
0.00	3.20	1.2	000	0.00	00
phosphat Human Gene SWISSPROT- ase ID:Q06124 PROTEIN-TYROSINE PHOSPHATASE 2C (EC 3.1.3.48) (PTP-2C) (PTP-1D) (SH-PTP3) (SH- PTP2) - HOMO SAPIENS (HUMAN), 593 aa.	phosphat Human Gene SWISSPROT- ase ID:P05186 ALKALINE PHOSPHATASE, TISSUE- NONSPECIFIC ISOZYME: PRECURSOR (EC 3.1.3.1) (AP- TNAP) (LIVER/BONE/KIDNEY ISOZYME) (TNSALP) - HOMO SAPIENS (HUMAN), 524 aa.	Human Gene Similar to TREMBLNEW-ID:D1024666 PROTEIN-TYROSINE-PHOSPHATASE (EC 3.1.3.48) - MUSMUSCULUS (MOUSE), 426 aa.		Human Gene SPTREMBL-ID:O00199 INTEGRAL MEMBRANE SERINE PROTEASE SEPRASE - HOMO SAPIENS (HUMAN), 760 aa.	proteasei Human Gene SWISSPROT- nhib ID:P01042 KININOGEN, HMW PRECURSOR (ALPHA-2-THIOL PROTEINASE INHIBITOR) (CONTAINS: BRADYKININ) - HOMO SAPIENS (HUMAN), 644 aa.
phosphat ase	phosphat ase	phosphat ase	protease	protease	proteasei nhib
SILENT- CODING	SILENT. CODING	SILENT. CODING	CODING	SILENT- CODING	SILENT- CODING
GIĄ	Arg	Ser	\alpha al	Val	Gin
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750 AACTGAAATACG / ACGTTGGTGGA GG[A/G]GAACGG TTTGATTCTTTGA CAGATC	GGTGGTGGTGG CCATCCAGATCC TG[C/A]GGAAGA ACCCCAAAGGCT TCTTCTT	GGCAAATGGTGT TGGAAAATAATT C[G/A]AATGTTAT TGCCATGATAAC CAGAG	1564 ACCTGAAAGCGAAAGCGAAAGCGAAAGCGAAAGGGAAAGGAAAGGAGG	589 CTGTTCCGTGGA TGAGAAGATAGT C[T/C]ACATTTCT GAAATATTCTGC TCTTG	TTGGAATTACCT ACTCAATTGTGC A[A/G]ACGAATTG TTCCAAAGAGAA TTTTC
750	1227	433	1564	589	793
404 cg42535091	405 cg43302847	406 cg39728924	407 cg42881873	408 cg42913398	409 cg44028327
404	405	406	407	408	409

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	1 (1p31)	÷		_	20 20p11.2)
			0	0	
1.10E-228	1.10E-171	1.80E-51			0.00E+00
0-	100	1.80			0.00
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Human Gene SWISSPROT- ID:P29622 KALLISTATIN PRECURSOR (KALLIKREIN INHIBITOR) (PROTEASE INHIBITOR 4) - HOMO SAPIENS (HUMAN), 427 aa.	_ (iii	Human Gene Similar to SWISSNEW-ID:P37040 NADPH-CYTOCHROME P450 REDUCTASE (EC 1.6.2.4) (CPR) - MUS MUSCULUS (MOUSE), 677 aa. pcls:SWISSPROT-ID:P37040 NADPH-CYTOCHROME P450 REDUCTASE (EC 1.6.2.4) (CPR) - MUS MUSCULUS (MOUSE), 677 aa.	Human Gene SPTREMBL-ID:Q13459 MYOSIN-IXB - HOMO SAPIENS (HUMAN), 2022 aa.	Human Gene TREMBLNEW- ID:G2961252 SUPERVILLIN - HOMO SAPIENS (HUMAN), 1788 aa.	Human Gene SWISSPROT- ID:P07204 THROMBOMODULIN PRECURSOR (FETOMODULIN) (TM) (CD141 ANTIGEN) - HOMO SAPIENS (HUMAN), 575 aa.
E (S)	3.5.5 TASI 10	SSN HROI MOU MOU SPR) 677	SNI SNI SNI	Η	LIN)
OT NOT NOT NOT NOT NOT NOT NOT NOT NOT N	C 1.6 FUC HON B aa.	SW(S) 1.6.7 17-10 17-10 (SE)	APIE	EW- B & B	ODI ODI MO
ATIN ATIN EASI S (H	SPR E (E (E (E (A)) - (B) -	CYT CEC CEC CHL CHL COU	EME O S	BLN RVII 178	SPR SOM OMO
WIST LIST KAL YOTI	WIS NON TASI ONE IAN)	MSS (188	HON HON aa.	REN UPE (AN)	WIS OME FET EN)
Human Gene SWISSPROT- ID:P29622 KALLISTATIN PRECURSOR (KALLIKREIN INHIBITOR) (PROTEASE INHIBITOF 4) - HOMO SAPIENS (HUMAN), 427 aa.	Human Gene SWISSPROT- ID:Q08257 QUINONE OXIDOREDUCTASE (EC 1.6.5.5) (NADPH:QUINONE REDUCTASE) (ZETA- CRYSTALLIN) - HOMO SAPIENS (HUMAN), 329 aa.	Human Gene Similar to SWISSNEW-ID:P37040 NADPH-CYTOCHROME P450 REDUCTASE (EC 1.6.2.4) (CPR) - MUS MUSCULUS (MOUSE), 677 aa. pcls:SWISSPROT-ID:P37040 NADPH-CYTOCHROME P450 REDUCTASE (EC 1.6.2.4) (CPR) - MUS MUSCULUS (MOUSE), 677 aa.	Human Gene SPTREMBL-ID:01 MYOSIN-IXB - HOMO SAPIENS (HUMAN), 2022 aa.	Human Gene TREMBLNEW-ID:G2961252 SUPERVILLIN -SAPIENS (HUMAN), 1788 aa	Human Gene SWISSPROT- ID:P07204 THROMBOMODULIN PRECURSOR (FETOMODULIN) (CD141 ANTIGEN) - HOMO SAP (HUMAN), 575 aa.
GE22 JRS TOR	S257 SPEC H:Q	GED (1940)	0 Z Z	1 Gel 1612 18 (1 Ge 204 JRS 1 AN (N),
HBI	ADP ETA	Imar :P37 :P37 F50 F 7 aa 7 aa NDPI SDU	YOS UM/	imar :G29 \PIE	ECI D14
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proteasei Human Gene SWISSPROT- nhib ID:P29622 KALLISTATIN PRECURSOR (KALLIKREIN INHIBITOR) (PROTEASE IN 4) - HOMO SAPIENS (HUM) aa.	reductas e	e e	៩	.ಕ .ಕ	ಕ
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Phe	Gly	ren	\sqrt{a}	Th .	Pro
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O	· -	σ	-	-	⋖
AACT AACT AAC	AGA TTT AGC ATG	ACC GA AACC AACC	AGA CAA TG	SCA CCA	200 200 200 200 300
GGA AAG TGT CAC	ATA TCA AGT ACC	AGG AAG AAG AAG	TGG AGA CAG	366(ACA TGG 1700	ACCION ACCIONAL
CAA CCA CCA CCA CCA CCA	ATC, GAA JCC, ACT, 3A	ACA 1707 1707 161	<u>гаа</u> АСС, 3јат 36С 6Т6	CTC TAC CJG AAA GAG	GGG TGC [A/G CGC CAG
CCTCAAGGACCA CTCCCAAAGACT T[C/T]TATGTTGA TGAGAACACAAC AGTCC	ATCATCATAAGA GAAGAATCATTT T[I/A]CCAGTAGC CCCACTACCATG AATGA	CCCACAAGGTCT ATGTCCAGCACC T[G/T]CTGAAGA GAGACAAAGAAC ACCTGT	ATCTGATGGAGA ACTACCAGATCG T[T/C]GTCAGCAA CCTGGCCACTG AGCGTG	GGGCTCGGGCA GGGTACACAAAC TC[T/C]GTGGCT GCAAAATCCCCA GAGGAGC	CTGGGGCTCCC CGCTGCCAGTG CCC[A/G]GCCGG CGCCGCCTGC AGGCAGACG
899 CCTCAAGGACCA CTCCCAAAGACT T[C/T]TATGTTGA TGAGAACACAAC AGTCC	905 ATCATCATAAGA GAAGAATCATTT T[7/A]CCAGTAGC CCCACTACCATG AATGA	142 CCCACAAGGTCT ATGTCCAGCACC T[G/T]CTGAAGA GAGACAAAGAAC ACCTGT	4726 ATCTGATGGAGA ACTACCAGATCG T[T/C]GTCAGCAA CCTGGCCACTG AGCGTG	1503 GGGCTCGGGCA GGGTACACAAC TC[T/C]GTGGCT GCAAAATCCCCA GAGGAGC	1475 CTGGGGCTCCC CGCTGCCAGTG CCC[A/G]GCCGC CGCCGCCTGC AGGCAGACG
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410 cg43979831	411 cg43987538	412 cg42717608	cg 43	414 cg43945592	415 cg43957486
410	411	412	413 cg43927378	414	415

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Human Gene SPTREMBL-ID: Q63358 MYOSIN HEAVY CHAIN - RATTUS NORVEGICUS (RAT), 1980 aa.	Human Gene SWISSPROT- ID:P02549 SPECTRIN ALPHA CHAIN, ERYTHROCYTE - HOMO SAPIENS (HUMAN), 2418 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.
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815 TGCTCGAGGAT GTCAACCGCATG TC[G/A]CCTGGG GCGCTGGCCAT	320 AACGCCTAGAG GGGGAGCTGGT GGC[C/A]CATGA GCCTGCCATCCA GAATGTGC	333 GGTCCATGCACA G CCTTGTGCTTCG A[G/A]CCCAGCA GGGCCTTGAGC ATGGCAT	GGGGCCGCTTG AACTTGCCCGC AG[A/G]TCAAATA GCTTCTGGTTCA TGTCCT	435 GATCAAATAGCT TCTGGTTCATGT C[C/T]TCCAGCTC CTTGCTGGTCTT CTGCCA	477 TCTTCTGCACCC TCACCTCCATGT C[G/A]TACTTCTC CTCTTCAGCCGC ATCGA	507 TCTCCTCTTCAG CCGCATCGATCT T[G/C]GCGTGCA GCTGTTTGCAGA GCTCCT
760 300 300 171	9860 9860 9800 9800	GGT CCT A(G/ AGA ATG	SGG AAC AG[A SCT	GATCA CCTGG CCTJT CTTGC CTGCA	TCTTC TCACC C[G/A]I CTCTT ATCGA	TCTCCT CCGCAT T[G/C]G(GCTGTT GCTCCT
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934	187	605	605	605	905	605
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cg44	2g43	2942	2942	2942	cg 42	cg42
416 cg44932934	417 cg43100187	418 cg42930605	419 cg42930605	,420 cg42930605	421 cg42930605	422 cg42930605
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1E-92	1E-92	1E-92	1E-92	1E-92 (1E-92	2.5E-89
Human Gene Similar to SWISSPROT- ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SPTREMBL-ID:Q01449 MYOSIN REGULATORY LIGHT CHAIN, CARDIAC MUSCLE ISOFORM - HOMO SAPIENS (HUMAN), 175 aa.
struct	struct	struct	struct	struct	struct	struct
	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Gin	Glu	His	Pro	Glu	Lys	Arg
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516 CAGCCGCATCG ATCTTGGCGTGC AGC/TITGTTTGC AGAGCTCCTGCA CTTCAG	528 TCTTGGCGTGCA GCTGTTTGCAGA G[C/IJTCCTGCA CTTCAGACATGG AGCCCG	558 GCACTTCAGACA TGGAGCCCGGG AT[A/G]TGCAGC GGCGGGCAGTG CTCCGCCA	564 CAGACATGGAG CCCGGGATATG CAG[C/A]GGCGG GCAGTGCTCCG	615 TCTGCTTCTCTG CCTCACGGCGG CT[C/I]TCCTCCT TCTCCAGCTCCG TGGCCG	TCTCTGCCTCAC GGCGGCTCTCC TC[C/J]TTCTCCA GCTCCGTGGCC GCTATCT	51 AATGGCCAGCA GGAAGGCGGGG ACC[C/A]GGGGC AAGGTGGCAGC CACCAAGCA
516	528	558	564	615	621	13
423 cg42930605	424 cg42930605	425 cg42930605	426 cg42930605	427 cg42930605	428 cg42930605	429 cg42893961
423	424	425	426	427	428	429

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7.3E-85	6E-55	0.00E+00
Human Gene Similar to SPTREMBL-ID:Q10466 TITIN, HEART ISOFORM N2-B (EC 2.7.1) (CONNECTIN) -HOMO SAPIENS (HUMAN), 26926 aa.	Human Gene Similar to SWISSPROT-ID:P07313 MYOSIN LIGHT CHAIN KINASE, SKELETAL MUSCLE (EC 2.7.1.117) (MLCK) - ORYCTOLAGUS CUNICULUS (RABBIT), 607 aa.	Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. pcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.
struct	struct	sulfotran sferase
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282 AATCAAGACAAA G CCCGAATTGAAA A[G/A]AAGATTGA AGCCCACTTTGA TGCCA	337 TGAAGAACGTAA 7 AGGACCGGGAG GA[T/C]GTGAAG AATGAGGTCAAC	953 GTAGATGGGTA O GAATAGTAGCCA GG[G/A]ACAAGA CAGCGGTTCTG CAGGGAGC
58	33	<u>හි</u> 6
430 cg42475816	431 cg42522566	432 cg43297806
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sulfotran Human Gene SWISSPROT- sferase ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. pcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.	Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. [pcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.
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962 TAGAATAGTAGC C CAGGGACAAGA CAGAJCGGTTC TGCAGGGAGCG TAGTGCCA	973 CCAGGGACAAG ACAGCGGTTCTG CA[G/A]GGAGCG TAGTGCCAGAG GGGTCTGG
96	973
433 cg43297806	434 cg43297806
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sulfotran Human Gene SWISSPROT- sferase ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. jpcis:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.	Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa.jpcis:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.
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1004 GTAGTGCCAGA GGGGTCTGGGA GGA[G/A]GCTGA AATCACCTGATA GAAGGTAT	1016 GGGTCTGGGAG GAGGCTGAAATC AC[C/T]TGATAGA AGGTATAGTTCA GAGCAA
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Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. pcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.	Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. pcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.
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	1028
437 cg43297806	438 cg43297806
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Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. jpcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.	N- 3.2) TE 0 VO	synthase Human Gene Similar to SWISSNEW-ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.
7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-	7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-	VISSIN AYLG C 6.3 RCUI
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Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. jpcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.	Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa.jpcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.	Human Gene Similar to SWISSNEW. ID:P54876 PHOSPHORIBOSYLFORMYLGLYCI AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSI:
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GGGG GGCT GCT	. AGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	CAC AGC GJAG GGG
GATAGAAGGTAT AGTTCAGAGCAA C[T/A]GGGTCTC CATGGGCTCGC TGATGCT	926 CAGAGGGGTAG TAAGTCAGCCAG CG[T/C]TGTAGAT GGGTAGAATAGT AGCCAG	445 CAGCCACATTCC GGTAAGCCTCG CA[AG]AGAGCC AGCTGGGCGCC AAGATACG
1043 GATAGAAGGTAT AGTTCAGAGCAA C[T/A]GGGTCTC CATGGGCTCGC TGATGCT	926	445 (
7806	7806	5668
94329		13951
439 cg43297806	440 cg43297806	441 cg39515668
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2.80E-72	2.80E-72	2.80E-72	2.20E-56	2.20E-56	2.20E-56
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synthase Human Gene Similar to SWISSNEW-ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.	Human Gene Similar to SWISSNEW-ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.	Human Gene Similar to SWISSNEW- ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.	Human Gene Similar to SWISSNEW- ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.	Human Gene Similar to SWISSNEW- ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.	Human Gene Similar to SWISSNEW-ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.
synthase	synthase	synthase	synthase	synthase	synthase
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
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<u>e</u>	Arg	Ala	Val	Glu	Gly
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538 CGATGCCGAGG TTGTCGTCAATA CG[A/G]ATCATG CCGGCATCATTC GGCTGAG	580 TCGGCTGAGCG AGCACAGTATTG CC[A/G]CGCACG AACCGGTCATAC TGGTCGG	655 GGGCGGAGCCA ACAAGGGCCAG CAG[G/C]GCCCC AGCAAGACCCTC ACCAGAGT	TGACCTCGCCAA TGACAGTGGCA GC[G/A]ACACCC CAATGGGCGCA GATCTCCA	273 CCTGGGGACTCG CTCATGAGGATC TC[T/C]TCAGGG GCGAGGTTCGG GTCGCGCA	GAACGCGGTCG AGCTCGACGTG CAT[G/A]CCACC GTCGCCAGCAC
538	580	655	177	273	327
442 cg39515668	443 cg39515668	444 cg39515668	445 cg21428405	446 cg21428405	447 cg21428405
442	443	444 (445	446	447

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2.60E-53	2.60E-53	2.60E-53	0.00E+00	2.90E-214	2.90E-214	2.90E-214
2.60	2.6(2.60	0.0	2.90	2.906	2.906
synthase Human Gene Similar to SWISSPROT-ID:P50004 ATP SYNTHASE BETA CHAIN (EC 3.6.1.34) - STREPTOMYCES LIVIDANS, 477 aa.	Human Gene Similar to SWISSPROT-ID:P50004 ATP SYNTHASE BETA CHAIN (EC 3.6.1.34) -STREPTOMYCES LIVIDANS, 477 aa.	Human Gene Similar to SWISSPROT-ID:P50004 ATP SYNTHASE BETA CHAIN (EC 3.6.1.34) - STREPTOMYCES LIVIDANS, 477 aa.	Human Gene SPTREMBL-ID:O00348 PUTATIVE ENDOTHELIN RECEPTOR TYPE B-LIKE PROTEIN - HOMO SAPIENS (HUMAN), 613 aa.	Human Gene SWISSPROT- ID:P49019 PROBABLE G PROTEIN- COUPLED RECEPTOR HM74 - HOMO SAPIENS (HUMAN), 387 aa.	Human Gene SWISSPROT- ID:P49019 PROBABLE G PROTEIN- COUPLED RECEPTOR HM74 - HOMO SAPIENS (HUMAN), 387 aa.	Human Gene SWISSPROT- ID:P49019 PROBABLE G PROTEIN- COUPLED RECEPTOR HM74 - HOMO SAPIENS (HUMAN), 387 aa.
synthase	synthase	synthase	tm7	tm7	tm7	tm7
SILENT- CODING	SILENT- CODING	SILENT.	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING
Arg	ng S	Ala	Giy	e .	Arg	\alpha \alpha
Arg	ag S	Ala	Giy	Ser	Arg	
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301 TCTCGTTGATGA GGTCGTTACCCT C[A/G]CGGGTAC GTTCACCGACAC CGGCGA	310 TGAGGTCGTTAC CCTCACGGGTA CG[T/C]TCACCG ACACCGGCGAA AACCGAAG	352 AAACCGAAGTAC CGCCGAAGTTGT G[G/C]GCGATAC GGTAAATCATCT CCTGAA	1703 GAGCACATAAG GTGAAGGTGGT GAC[T/A]CCCAG AGAAGCGACCT CTATATAGG	1736 AAGGGATGTCC CCAAACTTCCAG TC[T/C]GAACGC CGCACATAGTAG TCCATCA	1744 TCCCCAAACTTC CAGTCTGAACGC CIG/TJCACATAGT AGTCCATCACGA ACGGC	1796 GGCAGATGATCA GTAGAAAGTCAG C[T/C]ACTGCCA GGTTGAACAGG AAAATCC
301	310	352	1703	1736	1744	1796
448 cg38924050	449 cg38924050	450 cg38924050	451 cg43925970	452 cg41616031	453 cg41616031	454 cg41616031
448	449	450	451	452	453	454

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7.30E-106	7.30E-106	7.30E-106
7.30	7.30	7.30
Human Gene Homologous to SWISSPROT-ID:Q02038 NEUROLYSIN PRECURSOR (EC 3.4.24.16) (NEUROTENSIN ENDOPEPTIDASE) (MITOCHONDRIAL OLIGOPEPTIDASE M) (MICROSOMAL ENDOPEPTIDASE) (MEP) (SOLUBLE ANGIOTENSIN- BINDING PROTEIN) (SABP) - SUS SCROFA (PIG), 704 aa.	Human Gene Homologous to SWISSPROT-ID:Q02038 NEUROLYSIN PRECURSOR (EC 3.4.24.16) (NEUROTENSIN ENDOPEPTIDASE) (MITOCHONDRIAL OLIGOPEPTIDASE M) (MICROSOMAL ENDOPEPTIDASE) (MEP) (SOLUBLE ANGIOTENSIN- BINDING PROTEIN) (SABP) - SUS SCROFA (PIG), 704 aa.	Human Gene Homologous to SWISSPROT-ID:Q02038 NEUROLYSIN PRECURSOR (EC 3.4.24.16) (NEUROTENSIN ENDOPEPTIDASE) (MITOCHONDRIAL OLIGOPEPTIDASE M) (MICROSOMAL ENDOPEPTIDASE) (MEP) (SOLUBLE ANGIOTENSIN- BINDING PROTEIN) (SABP) - SUS SCROFA (PIG), 704 aa.
tm7	tm7	tm7
SILENT.	SILENT- CODING	SILENT- CODING
Ē	u Ö	Asp
본	ug S	Asp
Ø	4	O
O.	g	
393 GGCTGGTCAAC ACAGGTCTTCTG ACIC/GJCTGCGC CAGATTGTTTG AGCAAAG	402 ACACAGGTCTTC TGACCCTGCGC CA[G/A]ATTGTTT TGAGCAAAGTTG ATCAGT	423 GCCAGATTGTTT TGAGCAAAGTTG A[T/C]CAGTCTCT TCATACCAACAC ATCGC
38	402	423
455 cg42489842	456 cg42489842	457 cg42489842
455	456	457

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7.30E-106	7.30E-106	7.30E-106	1.40E-71
Human Gene Homologous to SWISSPROT-ID:Q02038 NEUROLYSIN PRECURSOR (EC 3.4.24.16) (NEUROTENSIN ENDOPEPTIDASE) (MITOCHONDRIAL OLIGOPEPTIDASE M) (MICROSOMAL ENDOPEPTIDASE) (MEP) (SOLUBLE ANGIOTENSIN- BINDING PROTEIN) (SABP) - SUS SCROFA (PIG), 704 aa.	Human Gene Homologous to SWISSPROT-ID:Q02038 NEUROLYSIN PRECURSOR (EC 3.4.24.16) (NEUROTENSIN ENDOPEPTIDASE) (MITOCHONDRIAL OLIGOPEPTIDASE M) (MICROSOMAL ENDOPEPTIDASE) (MEP) (SOLUBLE ANGIOTENSIN- BINDING PROTEIN) (SABP) - SUS SCROFA (PIG), 704 aa:	Human Gene Homologous to SWISSPROT-ID:Q02038 NEUROLYSIN PRECURSOR (EC 3.4.24.16) (NEUROTENSIN ENDOPEPTIDASE) (MITOCHONDRIAL OLIGOPEPTIDASE M) (MICROSOMAL ENDOPEPTIDASE) (MEP) (SOLUBLE ANGIOTENSIN- BINDING PROTEIN) (SABP) - SUS SCROFA (PIG), 704 aa.	Human Gene Similar to SWISSPROT- ID:Q15391 PROBABLE G PROTEIN- COUPLED RECEPTOR KIAA0001 - HOMO SAPIENS (HUMAN), 338 aa.
tm7	tm7	tm7	tm7
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT: CODING
ng -	Ala	Ala	Leu
leu	Ala	-, -,	Leu
O	0	-	∢
F		O	
TTTTGAGCAAAG TTGATCAGTCTC T[I/C]CATACCAA CACATCGCTGGA TGCTG	TTCATACCAACA CATCGCTGGATG C[T/C]GCAAGTG AATATGCCAAAT ACTGCT	CGCTGGATGCT GCAAGTGAATAT GC[C/T]AAATACT GCTCAGAAATAT TAGGAG	TTTTGTCTTTGC CAAACATCATCC T[G/A]ACAAATGG TCAGCCAACAGA GGACA
432	456	471	947
458 cg42489842	459 cg42489842	460 cg42489842	461 cg42927358
458	459	460	461

	3 (3q21)	=			0
1.40E-71	1.20E-55	2.30E-292	7.80E-54	1.70E-53	1.30E-115
Human Gene Similar to SWISSPROT-ID:Q15391 PROBABLE G PROTEIN-COUPLED RECEPTOR KIAA0001 -HOMO SAPIENS (HUMAN), 338 aa.	Human Gene Similar to SPTREMBL-ID:Q89609 G PROTEIN-COUPLED RECEPTOR - EQUINE HERPESVIRUS TYPE 2 (EHV-2), 383 aa.	transcript Human Gene SWISSPROT- factor ID:P32780 BASIC TRANSCRIPTION FACTOR 62 KD SUBUNIT (P62) - HOMO SAPIENS (HUMAN), 548 aa.	factor ID:061751 RENAL TRANSCRIPTION FACTOR KID-1 (TRANSCRIPTION FACTOR KID-1 (TRANSCRIPTION FACTOR 17) - MUS MUSCULUS (MOUSE), 572 aa. pcls:SWISSPROTID:061751 RENAL TRANSCRIPTION FACTOR KID-1 (TRANSCRIPTION FACTOR 17) - MUS MUSCULUS (MOUSE), 572 aa.	transcript Human Gene Similar to SPTREMBL- factor ID:008996 MYELIN TRANSCRIPTION FACTOR 1-LIKE - MUS MUSCULUS (MOUSE), 1182 aa.	Human Gene Homologous to TREMBLNEW-ID:G2738933 GLUTATHIONE TRANSFERASE (EC 2.5.1.18) - HOMO SAPIENS (HUMAN), 222 aa.
tm7	tm7	transcript factor	factor factor	transcript factor	transfera se
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Pro	Gly	т	<u>•</u>	Thr	n n
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g S	G	 -	o	O	O
544 ATGAATTTGACA CAATTGTCTTGC C[G/A]GTGCTTTA TCTCATTATATTT GTGG	1056 CCCTCCTCCTGG CTGAGAAAAGT T[G/T]CCCTTGTG CAAAAACACTAG GTACC	2389 TATGATTGGATG TGGAAGAACTAT C[T/C]GTTGCATT CACATTTAAACG ATTGG	800 CTCCTGTGTGTG TCCTTAAGTGTC T[G/A]ATGAGGT GTGACTTCTGGC TAAAGC	301 TGGAGGCGGCC CACATGGCGGC CAC[C/G]GCCAT CCTCAACCTGTC CACGCGCT	856 GGGCCATGTTAA CCACTTCCTTTT G[C/T]TGATCATC TGGTTTTAAGAA AGGAT
544	1056	2389	800	301	856
462 cg42927358	463 cg32423505	464 cg43968711	465 cg43297259	466 cg20612302	467 cg43949162
462	463	464	465	466	467

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2.60E-87	0.00E+00	3.30E-101	3.30E-101	3.30E-101
transfera Human Gene Similar to SPTREMBL-se ID:009034 GLUTAHIONE S-TRANSFERASE SUBUNIT 13 - RATTUS NORVEGICUS (RAT), 226 aa.	transport Human Gene SWISSPROT-ID:Q15436 PROTEIN TRANSPORT PROTEIN SEC23 HOMOLOG ISOFORM A - HOMO SAPIENS (HUMAN), 765 aa.	Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.
transfera se	transport	ubiquitin	ubiquitin	ubiquitin
SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING
Leu	Lys	<u>e</u>	Phe	Val
Leu	Lys	<u>e</u>	Phe	Val
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449 CATCCACATGGG C CCACGGTGATG GG[C/A]AGCCCA AAGGCTCCGTAT CTGCAGG	1859 GACAGCTCATTC GACTGTGTCAGA A[A/G]TTTGGAGA ATATCATAAAGA TGACC	CTTGACTGTTAA TATTACAATGAT A[G/A]ATTCTTGT CCGAAATGTAAC CTTTG	1041 ATTCTGGTGTAA AAGTGATATCGA G[A/G]AAGAATA CACCACCCTCAT ACACGG	1047 GTGTAAAAGTGA TATCGAGAAAGA A[T/G]ACACCAC CCTCATACACGG ATCCTG
449	1859	976	1041	1047
468 cg43928442	469 cg43976701	470 cg44005525	471 cg44005525	472 cg44005525
468	469	470	471	472

3.30E-101	3.30E-101	3.30E-101	3.30E-101	3.30E-101
Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.
ubiquitin	ubiquitin	ubiquitin	ubiquitin	ubiquitin
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT
Se .	Leu	າ ເ	Asp	Asn
ja S	nej	gin	Asp	Asn
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g	 -	 -	<	∢
1065 GAAAGAATACAC CACCCTCATACA C[G/A]GATCCTG GAGGCCCTAGA ATGGTTG	1080 CCTCATACACGG ATCCTGGAGGC CC[T/C]AGAATG GTTGATCTCCAT TCATAGA	1098 GAGGCCCTAGA ATGGTTGATCTC CA[T/C]TCATAGA TGTTATCGCCTT TGGGAC	1110 TGGTTGATCTCC ATTCATAGATGT T[A/G]TCGCCTTT GGGACCAGCAC TGCAAT	1134 TATCGCCTTTGG GACCAGCACTG CA[A/G]TTAGGT GGAGGGTCTAA AGTGATGT
1065	1080	1098	1110	1134
473 cg44005525	474 cg44005525	475 cg44005525	476 cg44005525	477 cg44005525
473	474	475	476	477

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	10 (10p11.2 3)	10 (10p11.2 3)	9 (9p12)		
				0	0
3.30E-101	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
.30E	00.0	00.0	0.00	0.00	00.0
Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN- CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	Human Gene SWISSPROT- ACC:Q05329 GLUTAMATE DECARBOXYLASE, 65 KD ISOFORM (EC 4.1.1.15) (GAD-65) (65 KD GLUTAMIC ACID DECARBOXYLASE) - Homo sapiens (Human), 585 aa.	Human Gene SWISSPROT- ACC:Q05329 GLUTAMATE DECARBOXYLASE, 65 KD ISOFORM (EC 4.1.1.15) (GAD-65) (65 KD GLUTAMIC ACID DECARBOXYLASE) - Homo sapiens (Human), 585 aa.	Q	Human Gene SWISSPROT- ACC:Q93075 HYPOTHETICAL PROTEIN KIAA0218 - Homo sapiens (Human), 761 aa.	Human Gene SWISSPROT- ACC:Q14157 HYPOTHETICAL PROTEIN KIAA0144 - Homo sapiens (Human), 983 aa.
008 1008 12-21 101 101 10	ISOF KD OXY 35 ag	KD OXY 35 ag	H OH :	AL Sap	AL Sap
ous to 5 UB 7 E E JBIQ 10UI HON 3 aa	(65 (65 (ARB(MAR (65 (7), 56	BL- IA - I 6 aa		SOT- FTIC FOMC
9) (1966)	SPF AM/ 1, 65 1, 6	SPF TAM TAM 1, 65 1-65) DEC/ Junar	MRN MRN), 59	SSPF STHI 8 - 1	SSPF STH 1 - 4
Home D:PE G EN 3.2.1 ASE) TEII	SWIS ALUTASE GAD GAD SID D	SWIS SLUT ASE GAD GAD SID D	MAN WAN	3WIS 17PC 14PC 14021	SWIS 4YP(4014 aa.
ne the transport of the	ine S 129 (2) 2) 2) (2) 2) AC pieni	ane S 229 (229 (2) 200 (2) 15) (3) 15) (4) 15) (4)	(HUI	ine 8 75 F 75 F 761 ¢	ine (S 157 F 157 F KIA 983 a
n Ge SPR UGA UGA IEN EIN EIN	n Ge 2053 2053 1.1. AMI(o sa	n Ge 2053 2053 RRBC 1.1. AMI(00 00 00 00 00 00 00 00 00 00 00 00 00	n Ge 293(EIN an), '	an), (a
Human Gene Homologous to SWISSPROT-ID:P51965 UBIQUITIN CONJUGATING ENZYME E2-21 KD UBCH6 (EC 6.3.2.19) (UBIQUITIN- PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) - HOMO SAPIENS (HUMAN), 193 aa.	Human Gene SWISSPROT- ACC:Q05329 GLUTAMATE DECARBOXYLASE, 65 KD ISOF((EC 4.1.1.15) (GAD-65) (65 KD GLUTAMIC ACID DECARBOXYL - Homo sapiens (Human), 585 aa.	Human Gene SWISSPROT- ACC:Q05329 GLUTAMATE DECARBOXYLASE, 65 KD ISOF (EC 4.1.1.15) (GAD-65) (65 KD GLUTAMIC ACID DECARBOXYL - Homo sapiens (Human), 585 aa	Human Gene SPTREMBL- ACC:Q15464 SHB MRNA - HOMO SAPIENS (HUMAN), 596 aa.	Human Gene SWISSPROT- ACC:Q93075 HYPOTHETICAL PROTEIN KIAA0218 - Homo s: (Human), 761 aa.	Human Gene SWISSPROT- ACC:Q14157 HYPOTHETICAL PROTEIN KIAA0144 - Homo sa (Human), 983 aa.
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ubiquitin	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS
qn	<u>S IS</u>	S IS	5 8	5 5	5 8
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SILENT	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
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Se	Ala	Gin I	Ser	Ser	Ser
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Ser	Ala	Gin i	Ser	Ser	Ser
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TGTTGGTCATAT ACTGAGTGGCAA T[A/G]CTTCCCAC CAAAGGGTCGG CAGGAT	CCGAGAACCCG GGCACAGCGAG AGC[C/G]TGGTG CCAAGTGGCCC AAAAGTTCA	CGGGCACAGCG AGAGCCTGGTG CCA[A/G]GTGGC CCAAAAGTTCAC GGGCGGCA	AACCTGAAGGC CAAAGTGTTGAC TC[G/A]GACTCG GAGAGCACAGT CAGCCCCC	CTCCATGGCTG GGATGCTCTGCT GC[G/A]CTTGGT TTTGCCCGAGTG GCAGCT	AGACACTGACCA CTGGGGGAGGT GC[A/G]GAGACT GTGCTGGATGTG GTGGAAA
2110 2110 2110 2110 2110	AAC AGC BITG TCA	ACA SIGT SIGT SIGT SIGT SIGT SIGT SIGT SIGT	CAC	2007 2007 2007 2007 2007	GGA GGA GAA AA
TGTTGG ACTGAG T[A/G]CT CAAAGG CAGGAT	CCGAGAACC GGCACAGC AGC[C/G]TG CCAAGTGGC AAAAGTTCA	CGGGCACA AGAGCCTG CCA[A/G]GT CCAAAAGTT GGGCGGCA	AACCTGAAC CAAAGTGTT TC[G/A]GAC GAGAGCAC CAGCCCC	CTCCATG GGATGCT GC[G/A]CT TTTGCCC GCAGCCT	AGACACT CTGGGGG GC[A/G]GA GTGCTGG GTGGAAA
828 TGTTGGTCATAT ACTGAGTGGCA/ T[A/G]CTTCCCA(CAAAGGGTCGG	225 CCGAGAACCCG GGCACAGCGAG AGC[C/G]TGGTG CCAAGTGGCCC AAAAGTTCA	234 CGGGCACAGCG AGAGCCTGGTG CCA[A/G]GTGGC CCAAAAGTTCAC GGGCGGCA	GAC CAC		AG/ CTC GC[GTC GTC
828	225	234	1501 AACCTGAAGGC CAAAGTGTTGA(TC[G/A]GACTCG GAGAGCACAGT CAGCCCC	3795	1098 AGACACTGACCA CTGGGGGAGGT GC[A/G]GAGACT GTGCTGGATGTG GTGGAAA
				<u>'</u>	
5525	3981	3981	7760	1812	483 cg43917756
400€	7663	7660	2907	330	391
478 cg44005525	479 cg17663981	480 cg17663981	481 cg42907760	482 cg43301812	cg4
478	479	480	481	482	483
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12	12	4	21 (21q22.1)	1 (1p21)	-
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Human Gene SPTREMBL- ACC:075176 KIAA0692 PROTEIN - HOMO SAPIENS (HUMAN), 783 aa (fragment).	Human Gene TREMBLNEW- ACC:BAA31589 KIAA0614 PROTEIN - HOMO SAPIENS (HUMAN), 1630 aa (fragment).	UNCLAS Human Gene SWISSNEW- SIFIED ACC:014924 REGULATOR OF G- PROTEIN SIGNALING 12 (RGS12) - Homo sapiens (Human), 1447 aa.		Human Gene SWISSNEW- ACC:P35573 GLYCOGEN DEBRANCHING ENZYME (GLYCOGEN DEBRANCHER) [INCLUDES: 4-ALPHA- GLUCANOTRANSFERASE (EC 2.4.1.25) (OLIGO-1,4-1,4- GLUCANTRANSFERASE) AMYLO- 1,6-GLUCOSIDASE (EC 3.2.1.33) (DEXTRIN 6-ALPHA-D- GLUCOSIDASE)] - Homo sapiens (Human), 1515 aa.	Human Gene SPTREMBL- ACC:Q92845 SMAP - HOMO SAPIENS (HUMAN), 792 aa.
UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Ser	Val	ren	Gly	j	Gly
Se .	Val	ren	Gly	Giy	Gly
<u> </u>	-	g	<u>o</u>	<u>.</u>	 -
(B			_		
2645 CATCTTCATCTA G GAAACGCCCTCA C[G/T]GAAATGG AATTGCTGCCAG ACGTGG	1031 CTGTGGTCCTCT C CCACAGACAGG GT[C/T]CACATCA AACTGGGGGGTG TCTCCAC	2157 CAAACTTCATGA C GATTGAAGATCT G[C/G]AGCTGCT GCTCCTTGAACA TGTCTG	2478 CCTCTACCCATC A GGTCAGTGCC CC[A/G]CCACCG GGGGGCTGCTG GGACTCTT GGACTCTT	3560 CCCGACAATTGT C ATCTGGCATAAA T[C/T]CCTTCACC CAGTAGATTAGG AATGA	1374 CATTAGAGATCT C GGGCTGCAAGG TC[C/T]CCAACAT AATCAATAAACA GATTTT
2645	1031	2157	2478	3560	1374
484 cg43918356	485 cg43924089	486 cg43926428	cg43950657	488 cg43955358	489 cg43970200
484	485	486	487	488	489

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0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Human Gene SPTREMBL- ACC:Q92845 SMAP - HOMO SAPIENS (HUMAN), 792 aa.	Human Gene SPTREMBL- ACC:O60281 KIAA0530 PROTEIN - HOMO SAPIENS (HUMAN), 1563 aa (fragment).	Human Gene SWISSPROT- ACC:P42858 HUNTINGTIN (HUNTINGTON'S DISEASE PROTEIN) (HD PROTEIN) - Homo sapiens (Human), 3144 aa.	Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).	Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).	Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).	Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS
SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING
Ala	Asn	ng	Asp		Thr	Gly
Ala	Asn	n B	Asp	Leu	Thr	Gly
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1629 TTAACTGTGGTA TACAGTCAGTGT A[T/C]GCAAACAT TGATTTAAAGCG GTCAT	3688 GTACAGCCTGGT/ ATGGAGAATCA A[A/G]TTTTGCTG TATCGTAAAGGC AGCAA	6789 TCAACTTGCTCC AGTAGGCCGCC GG[C/T]TCTGCA GGCAGCTCGGG CTGGAAGA	3172 ATGGGTAGACTC GAGTTTGGTAAA TG/AJTCCAAACC ATAGGCCACAAC CAAAC	TAGACTCGAGTT TGGTAAATGTCC A[A/G]ACCATAG GCCACAACCAAA CAAGTG	3199 CCAAACCATAGG CCACAACCAAAC A[A/T]GTGGACTC CAGACCCGAGG GAGCTG	3211 CCACAACCAAAC AAGTGGACTCCA G[A/G]CCCGAGG GAGCTGTGTAGA TACCTC
1629	3688	6289	3172	3177	3199	3211
490 cg43970200	491 cg43999667	492 cg44009187	493 cg44020180	494 cg44020180	495 cg44020180	496 cg44020180
490	491	492	493	494	495	496

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0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UNCLAS Human Gene SPTREMBL- SIFIED ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).	Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).	Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).	Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).		Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).	Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).
UNCLAS	SIFIED	SIFIED SIFIED	SIFIED	UNCLAS	SIFIED	UNCLAS SIFIED
SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING
Ala	Tyr	Gly	Vai	Val	Ser	Leu
Ala	Туг	Giy	Val	Va	Ser	ren
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3220 AACAAGTGGACT CCAGACCCGAG GG[A/C]GCTGTG TAGATACCTCGC ATTCGAG	3226 TGGACTCCAGAC CCGAGGGAGCT GT[G/A]TAGATAC CTCGCATTCGAG AAACTG	3232 CCAGACCCGAG GGAGCTGTGTA GAT[A/G]CCTCG CATTCGAGAAAC TGTCTGGT	CTGTGTAGATAC CTCGCATTCGAG A[A/G]ACTGTCTG GTTATAGTTGAT GAATC	3289 TGATGAATCGCT CTGCGTGTATCT G[T/G]ACATCTG GAGAATACGGG ATTAAGT	3298 GCTCTGCGTGTA TCTGTACATCTG G[A/G]GAATACG GGATTAAGTTCT CCTCTC	3312 TGTACATCTGGA GAATACGGGATT A[A/G]GTTCTCCT CTCTGCTTTGTT CTGTT
3220	3226	3232	3247	3289	3298	3312
497 cg44020180	498 cg44020180	499 cg44020180	500 cg44020180	501 cg44020180	502 cg44020180	503 cg44020180
497	498	499	200	501	502	503

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0		0	4	0	0	0
0.00E+00	0.00E+00	0.00E+00	1.70E-304	2.70E-299	2.70E-299	2.70E-299
0.0	0.0	0.0	1.70	2.70	2.70	2.70
Human Gene SPTREMBL- ACC:Q14700 MRNA (KIAA0090) FOR ORF (RELATED TO YEAST GENE IN CHROMOSOME III) - HOMO SAPIENS (HUMAN), 905 aa (fragment).	Human Gene SPTREMBL- ACC:P97526 NEUROFIBROMIN - RATTUS NORVEGICUS (RAT), 2820 aa.	UNCLAS Human Gene TREMBLNEW- SIFIED ACC:AAD23581 CULLIN 2 - HOMO SAPIENS (HUMAN), 745 aa.	Human Gene SWISSNEW- ACC:P46060 RAN-GTPASE ACTIVATING PROTEIN 1 - Homo sapiens (Human), 587 aa.	Human Gene SPTREMBL- ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.	Human Gene SPTREMBL- ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.	Human Gene SPTREMBL- ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS SIFIED
SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT.
Glu	His	Phe		Pro	Val	Thr
Glu	His	Phe	Leu	Pro	Val	Thr
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3319 CTGGAGAATACGIC GGATTAAGTTCT C(C/T)TCTCTGCT TTGTTCTGTTGG GATCT	2080 AGCAGGCAGAT C AGAAGTTCCTGT CA[C/TJTTTCTCC TTTTTACGGGG	TGTCTTGGTTTT G TGATAAATTGT T[G/A]AACTTATT GTTGAGATCAGC GCTGA	TCTTGAGCAGAC G CCATGTGCACGA G[G/C]AGCCTGG TGAGGAAGGTG TTGGAGT	1994 GCATGATAGGAT A ATGGAATTCCTC C(AT)CAAATGG GAAGTGTTCCTG TAATGA	2009 GAATTCCTCCAC T AAATGGGAAGTG T[T/A]CCTGTAAT GACGCAACCAA CCTTAA	2021 AAATGGGAAGTG G TTCCTGTAATGA C[G/A]CAACCAA CCTTAATATACA GCCAGC
3319	2080	1281	1266	1994	5009	2021
504 cg44020180	505 cg44928323	506 cg44932392	507 cg43991434	508 cg43985955	509 cg43985955	510 cg43985955
504	505	506	507	508	509	510

	22					
2.70E-299	4.60E-279	4.90E-278	1.80E-274	6.30E-266	2.70E-258	2.70E-258
UNCLAS Human Gene SPTREMBL- SIFIED ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.	Human Gene SPTREMBL- ACC:Q14776 LZTR-1 - HOMO SAPIENS (HUMAN), 552 aa.	Human Gene TREMBLNEW- ACC:BAA83037 KIAA1085 PROTEIN - HOMO SAPIENS (HUMAN), 584 aa (fragment).	Human Gene TREMBLNEW- ACC:AAD29670 DNA TOPOISOMERASE III BETA - HOMO SAPIENS (HUMAN), 862 aa.	Human Gene SPTREMBL- ACC:O60240 PERILIPIN - HOMO SAPIENS (HUMAN), 522 aa.	Human Gene SWISSNEW- ACC:Q14449 GROWTH FACTOR RECEPTOR-BOUND PROTEIN 14 (GRB14 ADAPTER PROTEIN) - Homo sapiens (Human), 540 aa.	
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS
SILENT. CODING	SILENT	SILENT. CODING	SILENT	SILENT. CODING	SILENT. CODING	SILENT. CODING
Pro.	nen	e.	⊕ ·	Val	Th	Asp
Ou	Leu	Ser	<u>e</u>	\ag	Thr	Asp
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2060 TATACAGCCAGC TO CTGTCATGAGAC CTT/GJCCAAACC CCTTTGGCCCTG TATCAG	2070 ACCTCGCCGTA GATAGCG CA[G/A]CATGGA CCTCGAAGGCCT GCCTGCTG	466 TGCAGCCCAGA (CGTCTTTTTAC TC[C/A]ATGGTAC CAAATGCAACTA	2445 CGATGCCATGCT CTCCATGAGCG TG/AJATGAGCTC GGCCTCCGTCA GGTAGT	1696 ACATGGCCCTCC CCTTGGTTGAGG A[G/A]ACAGCAG GGGCTGGTGTG AGGTGCA	340 TAAATCTTGTGT T GGCCATCATCCA G[T/G]GTGTGGA ACATTTCACCGT CATCTT	358 CATCCAGTGTGT C GGAACATTTCAC C[G/A]TCATCTTC TACTGGTATAAT TTGAA
SQ	50.	4	24	ğ	ď .	ř
511 cg43985955	512 cg44031765	513 cg43252100	514 cg43934178	515 cg43031103	516 cg43258841	517 cg43258841
511	512	513	514	515	516	517

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							2
2.70E-258	2.70E-258	2.70E-258	2.70E-258	2.70E-258	2.70E-258	2.70E-258	5.30E-253
Human Gene SWISSNEW- ACC:Q14449 GROWTH FACTOR RECEPTOR-BOUND PROTEIN 14 (GRB14 ADAPTER PROTEIN) - Homo sapiens (Human), 540 aa.		Human Gene SWISSNEW- ACC:Q14449 GROWTH FACTOR RECEPTOR-BOUND PROTEIN 14 (GRB14 ADAPTER PROTEIN) - Homo sapiens (Human), 540 aa.		Human Gene SWISSNEW. ACC:014449 GROWTH FACTOR RECEPTOR-BOUND PROTEIN 14 (GRB14 ADAPTER PROTEIN) - Homo sapiens (Human), 540 aa.	Human Gene SWISSNEW- ACC:Q14449 GROWTH FACTOR RECEPTOR-BOUND PROTEIN 14 (GRB14 ADAPTER PROTEIN) - Homo sapiens (Human), 540 aa.	Human Gene SWISSNEW- ACC:Q14449 GROWTH FACTOR RECEPTOR-BOUND PROTEIN 14 (GRB14 ADAPTER PROTEIN) - Homo sapiens (Human), 540 aa.	Human Gene SPTREMBL- ACC:Q13283 GAP SH3 BINDING PROTEIN - HOMO SAPIENS (HUMAN), 466 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING
o O	Lys	Lys	· 왕	Phe	<u>e</u>	Arg	Gly
o	Lys	Lys	₹ S	Phe	<u>e</u>	Arg	Gly
o o	<u> </u>	O	Ø	⋖	o o	U .	O
370 GGAACATTTCAC T CGTCATCTTCTA C[T/G]GGTATAAT TTGAAAGTGCTT TATTT	388 CTTCTACTGGTA C TAATTTGAAAGT G[C/T]TTTATTTT TGTCCATGACTC ATTG	394 CTGGTATAATTT T GAAAGTGCTTTA T[I/C]TTTTGTCC ATGACTCATTGA CAGTA	TTTGAAAGTGCT A TTATTTTTGTCC [A/G]TGACTCATT GACAGTACGAAA GTTT	TTTGTCCATGAC G TCATTGACAGTA C[G/A]AAAGTTTT GGGGTTACTCTG	484 AAACTCCATCCA A CAAGTCCTTGCT G[A/G]ATAATCAA TCGCTGAGCCTC ATCTC	493 CCACAAGTCCTT T GCTGAATAATCA A[T/C]CGCTGAG CCTCATCTCTAG AAATTT	2529 TCACTTTCCTGT T GGATTTCTTTCT G[7/C]CCGTAGA CTGCATCTGCTG GCTTTC
370	388	394	403	421	484	493	2529
518 cg43258841	519 cg43258841	520 cg43258841	521 cg43258841	522 cg43258841	523 cg43258841	524 cg43258841	525 cg43971614
518	519	520	521	522	523	524	525

S		12 (12q22)	12 (12q22)			5
5.30E-253	8.20E-245	2.00E-237	2.00E-237 (1.80E-236	3.10E-232	5.90E-231
Human Gene SPTREMBL- ACC:Q13283 GAP SH3 BINDING PROTEIN - HOMO SAPIENS (HUMAN), 466 aa.	Human Gene TREMBLNEW- ACC:CAB46424 DKFZP434G153 PROTEIN - HOMO SAPIENS (HUMAN), 466 aa.	Human Gene SWISSPROT- ACC:P42167 THYMOPOIETINS BETA AND GAMMA (TP BETA AND TP GAMMA) - Homo sapiens (Human), 453 aa.	Human Gene SWISSPROT- ACC:P42167 THYMOPOIETINS BETA AND GAMMA (TP BETA AND TP GAMMA) - Homo sapiens (Human), 453 aa.	Human Gene SPTREMBL- ACC:O75336 LIPRIN-BETA1 - HOMO SAPIENS (HUMAN), 1005 aa.	Human Gene SPTREMBL- ACC:Q99771 JIP-1 - HOMO SAPIENS (HUMAN), 467 aa.	Human Gene SWISSPROT- ACC:P08910 PROTEIN PHPS1-2 - Homo sapiens (Human), 425 aa.
UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
<u>ਜ</u> ਲ	Pro	Glu	Glu		Glu	Pro
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2574 GCTTTCCATTTG AATCCAATCCCC C[A/G]TGGACAT AAGAAGAGTTCT TTCCAT	916 TGTTCTTCAGGC CCTTCACCATGG A[A/G]GGCAGGA GGGCCTTCACCT TGGCGG	TTACTGGACCAT CTATACGAAAAT G[T/C]TCTGAAGT TTCCACCCTTTT CCTTG	1718 GAGTTCTTCTTG ACCCTCTTGTAG A[7/C]TCCCTAGT TAATGCCTGCAG AGGTC	CAAGAGAACAG CAAGTGCACCAA AC[T/C]TAGCTGA AACAGAAAAAGA GACAGC	GGCTCACCAGC TCCAGCTGCGT GTG[T/C]TCATCC ACCACCAGCGT GTACTTGA	1712 GGAAGTAGAGG TCAGGTGGGCC TGT[G/A]GGGCT CTTCAGGTTCAA ACACCGGA
2574	916	1667	1718	102	1709	1712
526 cg43971614	527 cg43320405	528 cg43922856	529 cg43922856	530 cg43991007	531 cg43940463	532 cg42676981
526	527	528	529	530	531	532

11 (11p15.5	N .	0	N			1.
2.10E-224	3.30E-221	3.30E-221	3.30E-221	2.80E-218	2.80E-215	2.00E-207
UNCLAS Human Gene SWISSPROT- SIFIED ACC:P04177 TYROSINE 3- MONOOXYGENASE (EC 1.14.16.2) (TYROSINE 3-HYDROXYLASE) (TH) - Rattus norvegicus (Rat), 498 aa.	Human Gene SPTREMBL- ACC:043813 SEVENTRANSMEMBRANE-DOMAIN PROTEIN - HOMO SAPIENS (HUMAN), 399 aa.	Human Gene SPTREMBL- ACC:043813 SEVENTRANSMEMBRANE-DOMAIN PROTEIN - HOMO SAPIENS (HUMAN), 399 aa.	Human Gene SPTREMBL- ACC:043813 SEVENTRANSMEMBRANE-DOMAIN PROTEIN - HOMO SAPIENS (HUMAN), 399 aa.	UNCLAS Human Gene SPTREMBL- SIFIED ACC:088473 RJS - MUS MUSCULUS (MOUSE), 4836 aa.	Human Gene SPTREMBL- ACC:015417 CAGL79 - HOMO SAPIENS (HUMAN), 413 aa (fragment).	UNCLAS Human Gene TREMBLNEW- SIFIED ACC:AAD34036 CGI-40 PROTEIN - HOMO SAPIENS (HUMAN), 845 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING
Lys	Gly	Arg	Thr	ren	Ala	Ser
Lys	<u>Q</u>	Arg	Thr	Leu	Ala	Ser
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843 GGAAGGAGGTC TACACCACGCTG AA[G/A]GGCCTC TACGCCACGCA	566 ACGTACCAAATG AAATGCTCTACG G(G/C)CGAATAG GCTACATCTATG CTCTGC	569 TACCAAATGAAA TGCTCTACGGG CG(A/C)ATAGGC TACATCTATGCT CTGCTTT	GCCATATTCAGC AGATTTGTGAAA C[A/C]ATTTTAAC CTCTGGAGAAAA CCTAT	1860 ACTTGACTTTCC AGACACGGTGA GG[A/G]AGGAGG AGGCTGTCGGG ACCAAACG	512 CAGGCATGGTG ATGAGGGGTGC TGG[G/T]GCCAG GGAGGTGGCAG GAGCTGGCA	1066 GCCTGGCCATT GTCATCTTCTTC TC[T/C]GTGCTG GGCGTGGTCTTT GGCGTGGTCTTT
843	566	269	629	1860	512	1066
533 cg43918561	534 cg43999712	535 cg43999712	536 cg4399712	537 cg43922139	538 cg43955639	539 cg41022625
533	534	535	536	537	538	539

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2.00E-207	2.00E-207	8.80E-205	2.70E-204	3.10E-202	2.80E-189	1.10E-170
Human Gene TREMBLNEW- ACC:AAD34036 CGI-40 PROTEIN - HOMO SAPIENS (HUMAN), 845 aa.	Human Gene TREMBLNEW- ACC:AAD34036 CGI-40 PROTEIN - HOMO SAPIENS (HUMAN), 845 aa.	Human Gene SPTREMBL- ACC:Q16543 CDC37 HOMOLOG - HOMO SAPIENS (HUMAN), 378 aa.	Human Gene SWISSPROT- ACC:P53602 DIPHOSPHOMEVALONATE DECARBOXYLASE (EC 4.1.1.33) (MEVALONATE PYROPHOSPHATE DECARBOXYLASE) - Homo sapiens (Human), 400 aa.		Human Gene SPTREMBL- ACC:O15268 SKAP55 PROTEIN - HOMO SAPIENS (HUMAN), 359 aa.	Human Gene SPTREMBL- ACC:060736 KE03 PROTEIN - HOMO SAPIENS (HUMAN), 367 aa (fragment).
UNCLAS SIFIED	SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING
Ala	lle	Arg	Lys	Leu	Gly	Pro
Ala	ejj	Arg	Lys	Leu	Gly	Pro
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4 ()	1111 GCAAAGGGAAC ACGGCGTTCTG GAT[C/T]GTCTTC TCCATCATTCAC ATCATCG	1439 CCTTGCGCTTGC ACTCGCGGCAG CC[C/T]CTGTCCA GTTCCTCCTTCT CCTTCT	702 GCCCCACCTGA GTGACAATGATG TA[T/C]TTGACCC CACCGGGGGTC GGCTCCA	486 ACTTGGAAAGAA AGTATGCAGCG CT[A/G]TACCAG CCTCTCTTGAC AAGAGAA	1134 CACACCAGCGC TTCTGCCACTCC GA[T/C]CCAAAG AAACTATGATCT TTGCTTT	TTTTCCAGATGC GACAGACATCAT T[T/C]GGGCATAT TCTAGAAACCAA GGGCA
1102	1111	1439	702	486	1134	1667
540 cg41022625	541 cg41022625	542 cg44002669	543 cg43302693	544 cg43921081	545 cg42181143	546 cg43918701
540	541	542	543	544	545	546

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2.50E-168	· 7.3E-165	5.1E-161	1.3E-155	1.9E-154	1.90E-154	1.90E-154
Human Gene SWISSNEW- ACC:P23280 CARBONIC ANHYDRASE VI PRECURSOR (EC 4.2.1.1) (CARBONATE DEHYDRATASE VI) - Homo sapiens (Human), 308 aa.		Human Gene SPTREMBL- ACC:Q63965 TRICARBOXYLATE CARRIER - RATTUS NORVEGICUS (RAT), 357 aa (fragment).	Human Gene TREMBLNEW- ACC:BAA32101 BCAP - HOMO SAPIENS (HUMAN), 331 aa.	Human Gene SPTREMBL- ACC:O75323 GBAS - HOMO SAPIENS (HUMAN), 286 aa.	Human Gene SPTREMBL- ACC:O75323 GBAS - HOMO SAPIENS (HUMAN), 286 aa.	UNCLAS Human Gene SPTREMBL- SIFIED ACC:075323 GBAS - HOMO SAPIENS (HUMAN), 286 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Asn	Thr	Asp ·	ren	Gin	Gly	Phe .
Asn	Thr	Asp	ren	ug	Gly	Phe
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O	O	១	Ö	O	 -	o o
815 AGAATTCCTTAC (TGGATCACCGCA A[C/T]AAGACCAT CCACAACGATTA CCGCA	263 GTGCCAGCTTCT (CATGGTGGCAT CIC/T)GTCAGGA TGCTGGGGTAG GGAGGTAG GGAGGTT	/ /B	1180 CTATATTCTCTG (ATTGTGCAAAGT A(C/TJAGGACATT ATATTCGACATC TTTGG	1319 GGTGCACCATGT ACAGCTGCCCAA T[C/T]TGAGAGAA GAATCCTCCGAC GGCTT	1334 GCTGCCCAATCT GAGAGAATC GAGAGAAGAATC CIT/CJCCGACGG CTCGTTACCAT CCTGTC	1361 CGACGGCTTCG (TACCATCCTGT CT[G/A]AAGCGG ATTGCACGAGCCC CAGTAAT
		<u>م</u>	+	 		`
547 cg43926685	548 cg44927654	549 cg43993462	550 cg44010310	551 cg43950590	552 cg43950590	553 cg43950590
547	548	549	550	551	552	553

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	-				41	14
1.90E-154	1.90E-154	1.90E-154	1.90E-154	1.90E-154	4.50E-152	4.50E-152
1.90	1.90	1.90	1.90	1.90	4.50	4.50
Human Gene SPTREMBL- ACC:O75323 GBAS - HOMO SAPIENS (HUMAN), 286 aa.	Human Gene SPTREMBL- ACC:O75323 GBAS - HOMO SAPIENS (HUMAN), 286 aa.	Human Gene SPTREMBL- ACC:O75323 GBAS - HOMO SAPIENS (HUMAN), 286 aa.	Human Gene SPTREMBL- ACC:O75323 GBAS - HOMO SAPIENS (HUMAN), 286 aa.	UNCLAS Human Gene SPTREMBL- SIFIED ACC:075323 GBAS - HOMO SAPIENS (HUMAN), 286 aa.	Human Gene TREMBLNEW- ACC:AAD45179 RIBONUCLEOPROTEIN - HOMO SAPIENS (HUMAN), 346 aa.	UNCLAS Human Gene TREMBLNEW-SIFIED ACC:AAD45179 RIBONUCLEOPROTEIN - HOMOSAPIENS (HUMAN), 346 aa.
Huma ACC: SAPII	Huma ACC: SAPII	Huma ACC:	Huma ACC: SAPII	Huma ACC: SAPII	Huma ACC: RIBO SAPII	Huma ACC: RIBO SAPII
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Ala	Ala	<u>e</u>	Tyr	Pro	Tyr	Val
Ala	Ala	⊕	ηγ	Pro	Tyr	Val
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F	A	ď	ď	∢	ď	T
1370 CGTTACCATCCT GTCTGAAGCGG AT[T/G]GCACGA GCCCAGTAATTG CCCCATT	CATCCTGTCTGA AGCGGATTGCA CG[A/G]GCCCAG TAATTGCCCCAT TCAATCA	CACGAGCCCAG TAATTGCCCCAT TC[AG]ATCATGG TTCTGGTCGGA	1436 GTCGGAGTTGGT AAGACCTGAGTT C[A/G]TATATATT AGGTCCGGATCT TGGCA	1445 GGTAAGACCTGA GTTCATATATATT [A/G]GGTCCGGA TCTTGGCACAGG CTCAT	1484 GAGTAGAATTCA AGAAGAGTTCAA T[A/G]TATCGATG TTGCATGTTATTT	1526 TATTITTATCITT AGACATGGCAG C[T/C]ACTGCATC TTCATGTGTCAC AAACT
1370	1376	1397	1436	1445	1484	1526
554 cg43950590	555 cg43950590	556 cg43950590	557 cg43950590	558 cg43950590	559 cg43951092	560 cg43951092
554	555	556	557	558	559	560

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4.50E-152	4.50E-152	4.50E-152	4.50E-152	3.30E-150	3.30E-150 ∴	2.10E-148
4.50	4.50	4.50	4.50	3.30	3.30	2.10
Human Gene TREMBLNEW- ACC:AAD45179 RIBONUCLEOPROTEIN - HOMO SAPIENS (HUMAN), 346 aa.	Human Gene TREMBLNEW- ACC:AAD45179 RIBONUCLEOPROTEIN - HOMO SAPIENS (HUMAN), 346 aa.	Human Gene TREMBLNEW- ACC:AAD45179 RIBONUCLEOPROTEIN - HOMO SAPIENS (HUMAN), 346 aa.	UNCLAS Human Gene TREMBLNEW- SIFIED ACC:AAD45179 RIBONUCLEOPROTEIN - HOMO SAPIENS (HUMAN), 346 aa.	Human Gene Homologous to SPTREMBL-ACC:Q15024 MRNA (HA0800) FOR ORF - HOMO SAPIENS (HUMAN), 290 aa (fragment).	Human Gene Homologous to SPTREMBL-ACC:Q15024 MRNA (HA0800) FOR ORF - HOMO SAPIENS (HUMAN), 290 aa (fragment).	Human Gene Homologous to SWISSNEW-ACC:Q99598 TRANSLIN- ASSOCIATED PROTEIN X (TRANSLIN-ASSOCIATED FACTOR X) - Homo sapiens (Human), 290 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT
Ala	Arg	ren	Asp	Tyr	Arg	Phe
Ala	Arg	neŋ	Asp	Tyr	Arg	Phe
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1583 CTGCTTCTCCTG / TGGCTCTGCCAT C[AG]GCTCCAA TATCAATATGAA CTCGTA	1604 CATCAGCTCCAA TATCAATATGAA CIT/GJCGTATTG GATTTAGTGGTG AGAAGA	TATCAATATGAA CTCGTATTGGAT T[T/G]AGTGGTG AGAAGAAATTAG CAATGT	1640 TTAGTGGTGAGA AGAAATTAGCAA T[G/AJTCATTTTC AGTTGCACGAAA AGGCA		724 TCGACCCCTCTT CATCCTCCAAA CIT/CJCGAACCC TTGGTATCCTTG TATGA TATTGA	319 TCAGGAAAAGGA AGCATGACAATT T[C/T]CCACATAA CCAAAGAAGAGA AGGGA
1583	1604	1616	1640	1135	724	319
561 cg43951092	562 cg43951092	563 cg43951092	564 cg43951092	565 cg43990820	566 cg43990820	567 cg43986914
561	562	563	564	565	566	567

8 (8q22)	6			
6.90E-141	2.50E-129	3.20E-127	3.20E-127	3.20E-127
UNCLAS Human Gene Homologous to SIFIED SWISSPROT-ACC:P00915 CARBONIC ANHYDRASE I (EC 4.2.1.1) (CARBONATE DEHYDRATASE I) - Homo sapiens (Human), 260 aa.	Human Gene Homologous to TREMBLNEW-ACC:BAA76379 TUDOR REPEAT ASSOCIATOR WITH PCTAIRE 2 - HOMO SAPIENS (HUMAN), 468 aa (fragment).	Human Gene Homologous to SPTREMBL-ACC:Q03626 ALPHA-1- INHIBITOR III PRECURSOR, ISOFORM 2 (RAT PLASMA PROTEINASE INHIBITOR ALPHA-1- INHIBITOR III GROUP 3 VARIANT 36A) (ALPHA-1 PROTEINASE INHIBITOR 3, EXONS 1-4) - RATTUS NORVEGICUS (RAT), 1487 aa.	Human Gene Homologous to SPTREMBL-ACC:Q03626 ALPHA-1- INHIBITOR III PRECURSOR, ISOFORM 2 (RAT PLASMA PROTEINASE INHIBITOR ALPHA-1- INHIBITOR III GROUP 3 VARIANT 36A) (ALPHA-1 PROTEINASE INHIBITOR 3, EXONS 1-4) - RATTUS NORVEGICUS (RAT), 1487 aa.	Human Gene Homologous to SPTREMBL-ACC:Q03626 ALPHA-1- INHIBITOR III PRECURSOR, ISOFORM 2 (RAT PLASMA PROTEINASE INHIBITOR ALPHA-1- INHIBITOR III GROUP 3 VARIANT 36A) (ALPHA-1 PROTEINASE INHIBITOR 3, EXONS 1-4) - RATTUS NORVEGICUS (RAT), 1487 aa.
UNCLAS SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Ser	Asp	nen	Ala	Arg
Ser	Asp	ren	Ala	Arg .
O	<u>ග</u>	O	<u>o</u>	<u> </u>
1245 AAGAAATTATCA T ATGTGGGGCATT C[T/C]TTCCATGT AAATTTTGAGGA CAACG	681 CAGTGCCAGAG A TCCAGGAACTGA AC[A/G]TCAAGA GCCCGGCTGCT GTGAACAT	429 CCACACAGGAC T ACTGTGGTGGC CCT[T/C]GATGCT CTGTCCAATAC GGAGCAG	435 AGGACACTGTG T GTGGCCTTGAT GC[T/C]CTGTCC AAATACGGAGCA GCTACTT	546 AGTTCCAAGTAG C ACAACAGTAATC G[C/T]CTGTTACT GCAGCAGGTCT CATTAC
568 cg43119818	569 cg44027444	570 cg29351416	571 cg29351416	572 cg29351416

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3.20E-127	3.20E-127	2.40E-123	3.10E-122
UNCLAS Human Gene Homologous to SIFIED SPTREMBL-ACC:Q03626 ALPHA-1- INHIBITOR III PRECURSOR, ISOFORM 2 (RAT PLASMA PROTEINASE INHIBITOR ALPHA-1- INHIBITOR III GROUP 3 VARIANT 36A) (ALPHA-1 PROTEINASE INHIBITOR 3, EXONS 1-4) - RATTUS NORVEGICUS (RAT), 1487 aa.	UNCLAS Human Gene Homologous to SIFIED SPTREMBL-ACC:Q03626 ALPHA-1- INHIBITOR III PRECURSOR, ISOFORM 2 (RAT PLASMA PROTEINASE INHIBITOR ALPHA-1- INHIBITOR III GROUP 3 VARIANT 36A) (ALPHA-1 PROTEINASE INHIBITOR 3, EXONS 1-4) - RATTUS NORVEGICUS (RAT), 1487 aa.	Human Gene Homologous to TREMBLNEW-ACC:CAB45700 HYPOTHETICAL 32.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 287 aa (fragment).	Human Gene Homologous to SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.
SIFIED	SIFIED	UNCLAS	UNCLAS SIFIED
SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT-CODING
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jų.	Asn	Ĕ	Lys
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645 TGTATGCTCAGA CCACGCTGAGAT A[C/T]AACATGCC CTTGGAGAAGCA GCAGC	648 ATGCTCAGACCA CGCTGAGATACA A[C/T]ATGCCCTT GGAGAAGCAGC AGCCTG		TCAACACAAGGC AGCCACAGGCC AA[A/G]ATCATTG TATTGGGTTTGT TACCTC
645	648	530	555
573 cg29351416	574 cg29351416	575 cg43950273	576 cg44930828
573	574	575	929

3.10E-122	3.10E-122	3.10E-122
UNCLAS Human Gene Homologous to SIFIED SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.	UNCLAS Human Gene Homologous to SIFIED SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.	UNCLAS Human Gene Homologous to SIFIED SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.
SIFIED	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT- CODING
Val	Lys	Asn
\alpha	rys	Asn
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564 GGCAGCCACAG / GCCAAAATCATT GT[A/G]TTGGGTT TGTTACCTCGAG GTGAGA	591 TGGGTTTGTTAC A CTCGAGGTGAG AA[A/G]CCCAATC CTTTGAGGCAAA AGAACG	597 TGTTACCTCGAG GTGAGAAACCCA A[T/C]CCTTTGAG GCAAAAGAACG CCAAGG
564	591	597
577 cg44930828	578 cg44930828	579 cg44930828
577	929	579

3.10E-122	3.10E-122	3.10E-122
UNCLAS Human Gene Homologous to SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.	UNCLAS Human Gene Homologous to SIFIED SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.	UNCLAS Human Gene Homologous to SIFIED SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.
UNCLAS	UNCLAS	SIFIED
SILENT- CODING	SILENT- CODING	SILENT- CODING
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Leu	Asn	u U
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603 CTCGAGGTGAG AAACCCAATCCT TT[G/A]AGGCAAA AGAACGCCAAG GTGAACC	615 AACCCAATCCTT TGAGGCAAAGA A[C/T]GCCAAGG TGAACCAACTCC TCAAGG	630 GGCAAAGAAC GCCAAGGTGAA CCA[AG]CTCCT CAAGGTTTCGCT GCCGAAGC
	619	930
580 cg44930828	581 cg44930828	582 cg44930828
580	581	582

3.10E-122	3.10E-122	3.10E-122
UNCLAS Human Gene Homologous to SIFIED SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.	Human Gene Homologous to SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.	Human Gene Homologous to SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.
SIFIED	SIFIED	SIFIED
SILENT- CODING	SILENT- CODING	SILENT- CODING
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645 AGGTGAACCAAC G TCCTCAAGGTTT C[G/C]CTGCCGA AGCTTGCCAACG TGCAGC	663 AGGTTTCGCTGC C CGAAGCTTGCCA A[C/T]GTGCAGC TCCTGGATACCG ACGGGG	690 TGCAGCTCCTG GATACCGACGG GGG[T/C]TTTGTG CACTCGGACGG TGCCATCT
645		069
583 cg44930828	584 cg44930828	585 cg44930828
583		585

		·		12	72
-122	119	-118	-115	-110	-110
3.10E-122	4.10E-119	2.00E-118	5.00E-115	2.90E-110	2.90E-110
Human Gene Homologous to SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.	Human Gene Homologous to SPTREMBL-ACC:Q63555 SP120 - RATTUS NORVEGICUS (RAT), 798 aa.	Human Gene Homologous to SPTREMBL-ACC:P70582 NUCLEOPORIN P54 - RATTUS NORVEGICUS (RAT), 510 aa.	Human Gene Homologous to SPTREMBL-ACC:O43770 BCL7C PROTEIN - HOMO SAPIENS (HUMAN), 217 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.
SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT.	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING
P P P	Val	Asp	Arg	Cys	His
Phe	Val	Asp	Arg	Sý O	His
O	F	ပ	⋖	⋖	⋖
 -	O	⊢	ပ	<u>ග</u>	5
693 AGCTCCTGGATA CCGACGGGGGT TT[/C]GTGCACT CGGACGGTGCC ATCTCCT	AAAACCCTGAGA AAAGATACAATG T[C/T]CTGGGAG CTGAGACTGTGC TCAATC	601 GCATGCCCAGTA ATAAAGATGAAG A[T/C]GGGCTAG TGGTTTTAGTTTT CAACA	248 AGTGGTGGATC CCCAGGAGGAG GAG[C/A]GAAGG CGGGCAGGTGG CGGGCAGGTGG	656 CTTTTGGCCCAT ACTTCTTTCCGT A[G/A]CAGGATTT GCAGTAGATCTC TTCAT	683 AGGATTTGCAGT AGATCTCTTCAT C[G/A]TGAATTGC CACTGTTGTGCT ATCTA
693	691	601	248	656	683
586 cg44930828	587 cg43975478	588 cg42530218	589 cg43122111	590 cg43986282	591 cg43986282
288	587	588	589	290	591

12	12	12	72	12	12	12
110	110	110	110	10	110	110
2.90E-110						
		Ν			N .	
Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.
e Hor -ACC IN-1 - 93 aa	e Hor -ACC IN-1 - 93 aa	e Hor ACC IN-1 - 93 ae	e Hor -ACC IN-1 - 93 aa	e Hor -ACC 	e Hor -ACC IN-1 - 93 aa	e Hor -ACC IN-1 - 93 as
Gen EMBL OTE (OTE	Gen SMBL OTE SE), 1	Gen SOTE SE), 1	Gen SOTE SE), 1	Gen SMBL OTE (SE), 1	Gen EMBL OTE (SE), 1	Gen EMBL OTE SE), 1
Human Gene Hom SPTREMBL-ACC: LIM PROTEIN-1 - (MOUSE), 193 aa.	Human Gene Horn SPTREMBL-ACC: LIM PROTEIN-1 - (MOUSE), 193 aa.	Human Gene Hon SPTREMBL-ACC: LIM PROTEIN-1 - (MOUSE), 193 aa	Human Gene Hon SPTREMBL-ACC: LIM PROTEIN-1 - (MOUSE), 193 aa	Human Gene Horn SPTREMBL-ACC: LIM PROTEIN-1 - (MOUSE), 193 aa.	Human Gene Horr SPTREMBL-ACC: LIM PROTEIN-1 - (MOUSE), 193 aa	Human Gene Horr SPTREMBL-ACC: LIM PROTEIN-1 - (MOUSE), 193 aa.
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SAAT TTGT FAAA	TTTC SATG AAGC GTGC	SAGO GAAG GCAAG SCCA SCCA	3700 3700 3700 3700	STTC ACAC CACA CACA	3676 1007 9660 1617	SGGT SAGG CACT CCT(
CATCGTGAATTG CCACTGTTGTGC T[A/G]TCTAAATT TTTCCTGCAAAC CATGC	CTAAATTTTTCCT GCAAACCATGCA [G/C]AGAAAGCA GCAGCGGTGGA AGCTCC	AGAAAGCAGCA GCGGTGGAAGC TCC[T/G]GCCAT CACACTGCACCT CTTCTGCG	TCCTGCCATCAC ACTGCACCTCTT C[T/A]GCGTGGT ACACGGTCCTCC CACAGG	GCACCTCTTCTG CGTGGTACACG GT[C/T]CTCCCAC AGGCCCCACAC TTGTTC	CTTCTGCGTGGT ACACGGTCCTCC C[AG]CAGGCCC CACACTTGTTTC CACCTC	GGTACACGGTC CTCCCACAGGC CCC[A/G]CACTT GTTTCCACCTCC CCAGACAG
704 CATCGTGAATTG CCACTGTTGTGC T[A/G]TCTAAATT TTTCCTGCAAAC CATGC	731 CTAAATTTTCCT GCAAACCATGCA [G/C]AGAAAGCA GCAGCGGTGGA AGCTCC		779 TCCTGCCATCAC ACTGCACCTCTT C[T/A]GCGTGGT ACACGGTCCTCC CACAGG	794 GCACCTCTTCTG CGTGGTACACG GT[C/T]CTCCCAC AGGCCCCACAC TTGTTTC	800 CTTCTGCGTGGT ACACGGTCCTCC C[A/G]CAGGCCC CACACTTGTTTC CACCTC	809 GGTACACGGTC CTCCCACAGGC CCC[A/G]CACTT GTTTCCACCTCC CCAGACAG
704	731	757	779	794	800	808
282	282		582	582	282	582
39862	39862	39862	39865	39862	cg43986282	39862
592 cg43986282	593 0943986282	594 cg43986282	595 cg43986282	596 cg43986282	7 cg 4,	598 cg43986282
297	266	65	1 69)69	597	291

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2.90E-110	1.70E-107	1.70E-107	4.50E-105	2.60E-102	2.60E-102	2.60E-102
Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to TREMBLNEW-ACC:BAA82158 HCR PROTEIN - HOMO SAPIENS (HUMAN), 756 aa.	UNCLAS Human Gene Homologous to SIFIED TREMBLNEW-ACC:BAA82158 HCR PROTEIN - HOMO SAPIENS (HUMAN), 756 aa.	Human Gene Homologous to SPTREMBL-ACC:Q91579 RIBONUCLEOPROTEIN - XENOPUS LAEVIS (AFRICAN CLAWED FROG), 462 aa.	Human Gene Homologous to SPTREMBL-ACC:Q13845 BCL7B PROTEIN - HOMO SAPIENS (HUMAN), 202 aa.	UNCLAS Human Gene Homologous to SIFIED SPTREMBL-ACC:Q13845 BCL7B PROTEIN - HOMO SAPIENS (HUMAN), 202 aa.	Human Gene Homologous to SPTREMBL-ACC:Q13845 BCL7B PROTEIN - HOMO SAPIENS (HUMAN), 202 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT
Asn	Asp	Leu	Phe	Ser	Lys	Val
Asn	Asp	Leu	Phe	Ser	Lys	Val
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o o	-	O	O	O	ပ	V
815 CGGTCCTCCCA CAGGCCCCACA CTT[G/A]TTTCCA CCTCCCCAGACA GGCATTC	651 GTCCCCTACCAC CACCGGTCACA GA[T/C]GTGAGC CTTGAGTTGCAG CAGCTGC	673 AGATGTGAGCCT TGAGTTGCAGCA G[C/T]TGCGGGA AGAACGGAACC GCCTGGA	727 AGATGGCTGGC CAGATGGGCAT GTT[C/T]AACCCC ATGGCCATCCCT TTCGGGG	TAGGTTCTCGGG CTGCTGAACTGT T[C/A]GATTTTGA CTTTTCTTTCTCC TTGC	1390 GGGCTGCTGAA CTGTTCGATTT GA[C/I]TTTTCTT TCTCCTTGCTGT CTGTCA	CTTGC CCACTT CCACTT
815		673	727	1381	1390	1420
599 cg43986282	600 cg42723058	601 cg42723058	602 cg43981269	603 cg43972159	604 cg43972159	605 cg43972159
599	009	601	602	603	604	909

7 (12q24.1	7 (12q24.1	7 (12q24.1)				
2.60E-102	2.60E-102	2.60E-102	7.90E-101	1.20E-100	2.40E-99	2.40E-99
UNCLAS Human Gene Homologous to SIFIED SPTREMBL-ACC:Q13845 BCL7B PROTEIN - HOMO SAPIENS (HUMAN), 202 aa.	Human Gene Homologous to SPTREMBL-ACC:Q13845 BCL7B PROTEIN - HOMO SAPIENS (HUMAN), 202 aa.	Human Gene Homologous to SPTREMBL-ACC:Q13845 BCL7B PROTEIN - HOMO SAPIENS (HUMAN), 202 aa.	Human Gene Homologous to SPTREMBL-ACC:Q14499 SPLICING FACTOR - HOMO SAPIENS (HUMAN), 530 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:075229 R31449_3 - HOMO SAPIENS (HUMAN), 813 aa (fragment).	Human Gene Similar to SPTREMBL- ACC:P97434 P116RIP - MUS MUSCULUS (MOUSE), 1024 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:P97434 P116RIP - MUSMUSCULUS (MOUSE), 1024 aa.
UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS
SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING
Lys	Lys	Lys	<u>■</u>	o O	Phe	Ser
Lys	Lys	Lys	<u>e</u>	Pro	Phe	Se .
-	F	-	F	∢ .	-	₹ .
O	O	O	O	ග ·	O	F
1426 CCTTGCTGTCTG TCACAGGAACCC A[C/T]TTAAATAT CCTCAGGGACG TGTCAC	1465 GGGACGTGTCA CCCACAGTCACC CA[C/T]TTCTTCT CCCATTTCCGCA	1522 CCGCCATCACCT TCTTGATGTCAT CCTJTTGGCCC GGCTACGGGTC TCGGCCC	GCAAGGTTCGC GATGTACGTATC ATC/TJTCAGATC GGAACTCACGTC GTTCTA	165 AAACGGAACTAT TTCCAGATGAGG C[G/A]GGGTGTC TGGGAGGGGCT GTGGGTG	CCAAGGAGAAC CCGTGCAGAAAA TT[C/T]CAGGCCA ACATCTTCAACA AGAGCA	277 ACTTTGACAACC CAGTACACCGGT C[T/A]CGGAAAT GGCAGCGACGG
1426	1465	1522	722	165	115	277
606 cg43972159	cg43972159	608 cg43972159	609 cg44911139	610 cg42539705	611 cg42028329	612 cg42028329
909	607	809	609	610	611	612

2.40E-99	2.40E-99	2.40E-99	2.40E-99	2.40E.99	6.40E-99	6.40E-99
UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:P97434 P116RIP - MUSMUSE), 1024 aa.	Human Gene Similar to SPTREMBL- ACC:P97434 P116RIP - MUS MUSCULUS (MOUSE), 1024 aa.	Human Gene Similar to SPTREMBL- ACC:P97434 P116RIP - MUS MUSCULUS (MOUSE), 1024 aa.	Human Gene Similar to SPTREMBL- ACC:P97434 P116RIP - MUS MUSCULUS (MOUSE), 1024 aa.	Human Gene Similar to SPTREMBL-ACC:P97434 P116RIP - MUS MUSCULUS (MOUSE), 1024 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB43370 HYPOTHETICAL 23.3 KD PROTEIN - HOMO SAPIENS (HUMAN), 206 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB43370 HYPOTHETICAL 23.3 KD PROTEIN - HOMO SAPIENS (HUMAN), 206 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING
Arg	Tyr	His	Arg	Th	Gly	Asp
Arg	Tyr	Ei Si	Arg	Thr	Gly	Asp
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<u>ග</u>	O	O	O	_ပ	ල	∢
295 ACCGGTCTCGG AAATGGCAGCG ACG[G/A]TTCTTC ATCCTTTACGAG CACGGCC	310 GGCAGCGACGG TTCTTCATCCTTT A[C/T]GAGCACG GCCTCTTGCGCT ACGCCC	316 GACGGTTCTTCA TCCTTTACGAGC A[C/T]GGCCTCTT GCGCTACGCCC TGGATG	328 TCCTTTACGAGC ACGGCCTCTTGC G[C/A]TACGCCC TGGATGAGATGC CCACGA	352 GCTACGCCCTG GATGAGATGCC CAC[G/C]ACCCT TCCTCAGGGCA CCATCAACA	540 TCGCGAGAACG GCCTCAGTGCC AAG[G/T]CCCTTA CCCCTGCAGCT GGGCTCTG	TCTCCCCCAAGG TGGGGTCTTCTA G(A/G)TCTGTGA GGAAGAGGTTC ACATCTC
295	310	316	328	352	540	909
613 cg42028329°	614 cg42028329	cg42028329	616 cg42028329	cg42028329	618 cg42392719	619 cg42392719
613	614	615	616	617	618	619

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6.40E-99	1.20E-98	1.20E-98	1.20E-98	1.20E-98	1.20E-98	1.20E-98
Human Gene Similar to TREMBLNEW-ACC:CAB43370 HYPOTHETICAL 23.3 KD PROTEIN - HOMO SAPIENS (HUMAN), 206 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICAL PROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICALPROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICALPROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SWISSPROT- ACC:P03740 HYPOTHETICAL PROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICAL PROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICAL PROTEIN ORF194 - Bacteriophage lambda, 194 aa.
UNCLAS	SIFIED	UNCLAS	UNCLAS	UNCLAS	SIFIED	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING
Asp	Val	Asp	Phe	≘	Pro	Thr
Asp	Val	Asp	Phe	=	Pro	Thr
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627 CTAGATCTGTGA GGAAGAGGTTC AC[A/G]TCTCCCA CCATGCAGCTCT CTTCAG	597 ACGCGTCGCCG GAAGCCACGTC ATA[G/A]ACGGTT TTACCCCGATGG TCTTCAA	CGTCATAGACG GTTTTACCCCGA TG[G/A]TCTTCAA CGAGATGCCAC GATGCCT	663 CCTCATCACTGT TGAAACAGCCA C[A/G]AAGCCAG CCGGAATATCTG GCGGTG	690 AGCCAGCCGGA ATATCTGGCGGT GC[A/G]ATATCG GTACTGTTTGCA GGCAGAC	708 GCGGTGCAATAT CGGTACTGTTTG C[A/T]GGCAGAC CGGTATGAGGC GGAATAT	TATCGGTACTGT TTGCAGGCAGA CC[G/T]GTATGA GGCGGAATATAT GCGTCAC
627	597	615	663	069	708	717
620 cg42392719	621 cg39512856	cg39512856	623 cg39512856	624 cg39512856	625 cg39512856	626 cg39512856
620	621	622 (623	624	625	929

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2.80E-96	3.20E-95	3.30E-94	3.30E-94	1.00E-90	4.50E-89	4.50E-89
Human Gene Similar to SPTREMBL- ACC:Q63615 VACUOLAR PROTEIN SORTING HOMOLOG R-VPS33A - RATTUS NORVEGICUS (RAT), 597 aa.	Human Gene Similar to SWISSNEW- ACC:P12346 SEROTRANSFERRIN PRECURSOR (SIDEROPHILIN) (BETA-1-METAL BINDING GLOBULIN) - Rattus norvegicus (Rat), 698 aa.	Human Gene Similar to SPTREMBL- ACC:035884 NEBULIN-RELATED ANCHORING PROTEIN (N-RAP) - MUS MUSCULUS (MOUSE), 1175 aa.	Human Gene Similar to SPTREMBL- ACC:035884 NEBULIN-RELATED ANCHORING PROTEIN (N-RAP) - MUS MUSCULUS (MOUSE), 1175 aa.	Human Gene Similar to SPTREMBL- ACC:O15194 HYA22 - HOMO SAPIENS (HUMAN), 340 aa.	Human Gene Similar to SPTREMBL-ACC:000581 HYPOTHETICAL 20.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 176 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:000581 HYPOTHETICAL 20.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 176 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT.	SILENT. CODING	SILENT.	SILENT. CODING	SILENT. CODING	SILENT. CODING
<u>=</u>	nen	€	۲۸	₩	Asp	卢
<u>e</u>	Leu	£	ry.	£	Asp	Thr
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599 CCCTGCAAGCTC C TGTATGGAACGA T[C/T]CCCCAGAT CTTGGGAAAGG AGAAT AGAAT	294 CAGATCCAGTG G GCCTTCCCCCA GCT[G/T]TGTCAA CTGTGTCCAGG CTGTGGCT	454 GTGAACAGTGTA T AATCAGTTTTC AIT/CJTGGGACAT GAAATCCAAGGA TAAGG	625 CTCGAAAGTCTC T TTGGTGAGGAAT A[7/C]ACAGAAGA CTATGAGCAACC CAGGG	AGGTCTACGTGT T TGAAGCGTCCTC A[T/C]GTGGATG AGTTCCTGCAGC GAATGG	755 AAGACCATTTAC T AAGTAGAAAATG A[1/C]GCTTACCC TGGTACCGATAG AACAG	770 TAGAAAATGATG C CTTACCCTGGTA C[C/T]GATAGAAC AGAAATGTTAA ATATA
369	294	454	625	561	755	777
627 cg37445474	628 cg30791729	629 cg42522690	630 cg42522690	1 cg43982164	632 cg43980889	633 cg43980889
62	62	62	89	631	8	63

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4.50E-89	4.50E-89	1.10E-87	1.10E-87	2.60E-86	1.20E-83	1.90E-83
	Human Gene Similar to SPTREMBL-ACC:000581 HYPOTHETICAL 20.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 176 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD27745 CGI-36 PROTEIN -HOMO SAPIENS (HUMAN), 165 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD27745 CGI-36 PROTEIN -HOMO SAPIENS (HUMAN), 165 aa.	Human Gene Similar to SPTREMBL-ACC:O75249 R26660_1, PARTIALCDS - HOMO SAPIENS (HUMAN), 291 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:BAA76824 KIAA0980 PROTEIN -HOMO SAPIENS (HUMAN), 1406 aa (fragment).	Human Gene Similar to SWISSNEW-ACC:Q02380 NADH-UBIQUINONE OXIDOREDUCTASE SGDH SUBUNIT PRECURSOR (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-SGDH) (CI-SGDH) - Bos taurus (Bovine), 189 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING
Arg	Lys	Ser	Pro	Ala	Ala	Arg
Arg	Lys	Ser	5 5	Ala	Ala	Arg
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4	⋖	G	g	<u></u>	 -	o
776 ATGATGCTTACC CTGGTACCGATA G[A/G]ACAGAAA ATGTTAAATATA GACAAG	I GTACCGATAGAA A CAGAAAATGTTA A[AG]TATAGACA AGTGGACCATTT TGCCT	449 CTTCCACCACGC GCCTGCTGCTGCTGCTGCTGCACAAAAAAAAAA	476 TGACAAAGGCCA G CCTTGTTGGTGT C(G/A)GGCTTGA GGCGAATGAAG CCACACT	1516 GGCCTTCGATCC AGTCCATGAGCA AT/CJGCCATATA GCGCGGCGCAG AGAGCT	258 GGGTTCTTCAAC TGGACAGGAG GC[T/C]TCTACCC ACCAGGCCCAA AACGAGG	449 TCAACATAAGGT (AGAATTTCATTA AGAATTTCATTA A(C/T)CTCAAGAA GCGAGCGTCAT AGTATA
777	791	44	47(151	52	44
634 cg43980889	635 cg43980889	636 cg43955651	cg43955651	638 cg42353267	639 cg37027086	640 cg42688841
634	635	636	637	838	639	640

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1.90E-83	1.90E-83	1.90E-83	3.20E-79	3.20E-79	1.60E-77
UNCLAS Human Gene Similar to SWISSNEW-SIFIED ACC:Q02380 NADH-UBIQUINONE OXIDOREDUCTASE SGDH SUBUNIT PRECURSOR (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-SGDH) (CI-SGDH) - Bos taurus (Bovine), 189 aa.	UNCLAS Human Gene Similar to SWISSNEW-SIFIED ACC:Q02380 NADH-UBIQUINONE OXIDOREDUCTASE SGDH SUBUNIT PRECURSOR (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-SGDH) (CI-SGDH) - Bos taurus (Bovine), 189 aa.	Human Gene Similar to SWISSNEW-ACC:Q02380 NADH-UBIQUINONE OXIDOREDUCTASE SGDH SUBUNIT PRECURSOR (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-SGDH) (CI-SGDH) - Bos taurus (Bovine), 189 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q28282 C3VS PROTEIN -CANIS FAMILIARIS (DOG), 659 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC: Q28282 C3VS PROTEIN - CANIS FAMILIARIS (DOG), 659 aa.	UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:AAD25021 CALCIUM-REGULATED HEAT STABLE PROTEIN CRHSP-24 - HOMO SAPIENS (HUMAN), 147 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING
ren .	Ala	Ser	ren ren	Val	Thr
ren	Ala	e.	ne 7	\alpha	Thr
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×	⋖	⋖	⋖	<u>o</u>	⋖ ∵
454 ATAAGGTAGAAT TTCATTAACCTC A[A/G]GAAGCGA GCGTCATAGTAT AAAGAA	461 AGAATTTCATTA ACCTCAAGAAGC G[A/G]GCGTCAT AGTATAAAGAAG GCTTGA	TCAAGAAGCGA GCGTCATAGTAT AA[A/G]GAAGGC TTGACGACAAAC AGTCTCT	1590 CACTGTGACCAT TTTGTACAGCAA G[A/C]AGCAGCG GTATATTCCCAT CCAAAT	1716 GTAAAGCTGTTT TCCCAGAGCTGT C[G/A]ACACTTTC GGCTGGGCATTT AGACT	320 CATGCTTGGTGC CTGGTGCCAGG TG[A/G]GTGATG ACGACCTCCAC GGCCTGCA
454	461	476	1590	1716	320
641 cg42688841	642 cg42688841	643 cg42688841	644 cg43982291	645 cg43982291	646 cg44003673
119	642	643	644	645	646

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1.60E-77	1.60E-77	7.00E-77	7.20E-75	7.2E-75	7.2E-75	7.2E-75
Human Gene Similar to TREMBLNEW-ACC:AAD25021 CALCIUM-REGULATED HEAT STABLE PROTEIN CRHSP-24 - HOMOSAPIENS (HUMAN), 147 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD25021 CALCIUM-REGULATED HEAT STABLEPROTEIN CRHSP-24 - HOMOSAPIENS (HUMAN), 147 aa.	Human Gene Similar to SPTREMBL-ACC:062630 SM-20 - RATTUS NORVEGICUS (RAT), 355 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Pro Pro	<u>.</u>	Gly	Arg	Gly	Asp	Gly
Pro	<u>e</u>	Gly	Arg	Gly	Asp	Gly
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449 CATCAGAGATGT G GCAGGAAGATG TC[G/A]GGGCCG CCATCAGCTGG	470 TGTCGGGGCCG A CCATCAGCTGG GGT[A/G]ATGAA GCCATGGCCCTT GGACCGGC	1207 CGCGCACCTCG T TCGCCGATCTGC TG[T/C]CCGGTC TCCTTGCCGAG GAAGTCGT	704 GGTCTGCCCGA C TCCGGGATGGC TGC[C/A]GGTGG GTGATCGACGG	721 ATGGCTGCCGG T TGGGTGATCGA CGG[T/C]AGGCC GGACAATGCCC CGGCCCGTC	772 GAGGACAGCCA T TGGAAGGGCAC GGA[T/C]CGCCA GTGCCGCGGCG	823 ACGTGGTGCGC A AACAGCCCTCAC GG[A/G]GTGAAG GTCCAGATGGCT
3673	· ·	<u> </u>		3553	3553	3553
647 cg44003673	648 cg44003673	649 cg44936941	650 cg39523553	651 cg39523553	652 cg39523553	653 cg39523553

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			11	16	16	
7.2E-75	7.2E-75	1.3E-73	1.10E-71	1.10E-71	1.10E-71	4.90E-69
Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to TREMBLNEW- ACC:BAA83051 KIAA1099 PROTEIN - HOMO SAPIENS (HUMAN), 804 aa.	Human Gene Similar to SPTREMBL-ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.	Human Gene Similar to SPTREMBL-ACC:P90839 F16A11.1 -CAENORHABDITIS ELEGANS, 673 aa.	Human Gene Similar to SPTREMBL-ACC:P90839 F16A11.1 -CAENORHABDITIS ELEGANS, 673 aa.	Human Gene Similar to SPTREMBL- ACC:O75473 ORPHAN G PROTEIN- COUPLED RECEPTOR HG38 - HOMO SAPIENS (HUMAN), 907 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED ·	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING
Ser	ng	<u>e</u>	Val	Tyr	Gly	ren
Ser	gin	<u>ə</u>	Val	Туг	Gly	neŋ
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874 CCTGGCCCGAG CTCGATCAGGCA TC[A/G]AGGTGC CTGGAATCCTTA CTCGATG	TCGATCAGGCAT CAAGGTGCCTG GA[A/G]TCCTTAC TCGATGACGGTT TAGTGC	399 GCTGCTGCTTCT TCCTTGTGGCAA C[G/A]ATCTTCTG GGCAACGTCCT GGAAGA	TTCAGTGCACAA ATGAGATGAATG T[G/T]AACATCCC ACAGTTGGCAGA CAGTT	655 AGGAGTATTCAT CATCCCAATGC C[G/A]TAGCCTTC ATGATTGAGGAA TTTGC	712 GAGTGGCCCAG CCAATCTGCATG AC[G/A]CCAGAA GTGACCACTGTT ACTTCAT	73 AGAATCTCACCA GCCTTGTGGTGC T[G/A]CATTTGCA TAACAACCGCAT CCAGC
874	888	399	375	655	712	73
654 cg39523553	655 cg39523553	656 cg36728314	657 cg41677120	658 cg44126579	659 cg44126579	660 cg38925480
654	655	656	657	658	629	099

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1.00E-68	1.00E-68	1.00E-68	1.3E-68	1.3E-68	1.3E-68	2.3E-68
Human Gene Similar to SWISSPROT-ACC:P50636 GAMETOGENESIS EXPRESSED PROTEIN GEG-154 - Mus musculus (Mouse), 429 aa.	Human Gene Similar to SWISSPROT-ACC:P50636 GAMETOGENESIS EXPRESSED PROTEIN GEG-154 - Mus musculus (Mouse), 429 aa.	Human Gene Similar to SWISSPROT-ACC:P50636 GAMETOGENESIS EXPRESSED PROTEIN GEG-154 - Mus musculus (Mouse), 429 aa.	Human Gene Similar to SPTREMBL-ACC:088552 CLAUDIN-2 - MUS MUSCULUS (MOUSE), 230 aa.	Human Gene Similar to SPTREMBL- ACC:O88552 CLAUDIN-2 - MUS MUSCULUS (MOUSE), 230 aa.	Human Gene Similar to SPTREMBL- ACC:O88552 CLAUDIN-2 - MUS MUSCULUS (MOUSE), 230 aa.	Human Gene Similar to SPTREMBL- ACC:Q14676 KIAA0170 PROTEIN - HOMO SAPIENS (HUMAN), 2089 aa.
UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS
SILENT- CODING	SILENT.	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING
Gly	uig .	ogu Gu	Ser	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ren	Gly
Gly	uig Uig	Gin	Ser	Val	neJ	Gly
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	⋖	⋖	g	_O	O	U
544 GCACCAGCGGA AGCCCTACAGACGGACGGACGCTCAGGCGCGAGGCGCAAGGGCCCAAGGGGCCCTACA	559 CTACAGACGGA A CTCAGCGTCATG CALA/GJGGGCCC TACAGCGAACA GCCAGCT	664 GAAAATACAGCC / GGTTAGAAGTTC / A[A/G]GCCGATG / TCCAAAAGGAAA	263 CCACCACAGAG C ATAATGCAGGCC AG[G/C]GAGGAG ATTGCACTGGAT GTCACCA	CAACTGCTGTCA CAATGCTGGCAC C[G/A]ACATAAGA ACTTGTTTTCCA GCTGG	482 GGAGCAGCATG GGCAACCAGTGT GCAACCAGTGT GCCCAGAAAAGCCCAGAAAGGCCTAGAAGGCCTAGAAGGCCTAGGATGT	231 AGCCCACATCTC CAGG AGGCCACTAGG GG[C/A]AGAACA AATAGGTCCTCT GTCAAGA
544	559	964	263	431	482	231
661 cg43323149	662 cg43323149	663 cg43323149	664 cg34243633	665 cg34243633	666 cg34243633	667 cg43942922
661	662		664	665	999	299

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2.3E-68	2.3E-68	6.4E-68	2.5E-65	1.4E-62	1.4E-62	5.1E-62
Human Gene Similar to SPTREMBL- ACC:Q14676 KIAA0170 PROTEIN - HOMO SAPIENS (HUMAN), 2089 aa.	Human Gene Similar to SPTREMBL-ACC:Q14676 KIAA0170 PROTEIN -HOMO SAPIENS (HUMAN), 2089 aa.	Human Gene Similar to SWISSPROT-ACC:P39194 IIII ALU SUBFAMILY SQ WARNING ENTRY IIII - Homo sapiens (Human), 593 aa.	Human Gene Similar to SPTREMBL-ACC:Q07320 ZEIN-ALPHA PRECURSOR (ZSF4C4) - ZEA MAYS (MAIZE), 266 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD34051 CGI-56 PROTEIN -HOMO SAPIENS (HUMAN), 317 aa.	Human Gene Similar to TREMBLNEW- ACC:AAD34051 CGI-56 PROTEIN - HOMO SAPIENS (HUMAN), 317 aa.	Human Gene Similar to SWISSPROT-ACC:Q04205 TENSIN - Gallus gallus (Chicken), 1744 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING
neŋ	Val	Val	ne	Arg		Gly
Leu	. Val	Val	ne T	Arg	Ser	Gly
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291 CAGTTGTCCCCA CAGCCCTGAG CT[C/T]CAGCCTT CCACCTCCACAG ACCAGC	CTGTCAAGACCC CTGAAACAGTTG TIG/CICCCACAG CCCCTGAGCTC CAGCCTT	1090 CCTGGCCAACAT GGCAAAACCC GT[C/T]TCTACTA AAATACAAAA GCCGGG	401 CACTCACAAAAA GGGCCAAGAAGC GC[A/G]AGGAGG GATAATGTCTTG GAAAGCCA	TTGGTGAAGAG GTTGTACAGCAC TC[G/T]TAGTGTA GACTTCAGGTCA CAGTTG	404 AGAGGTTGTACA GCACTCGTAGTG T[A/G]GACTTCAG GTCACAGTTGAC AATGT	1049 GCTTGGACCGG CATGTGGCCTAT GG[T/C]GGCTAT TCTACCCCGGA GGATCGGA
291	396	1090	401	397	404	1049
668 cg43942922	669 cg43942922	670 cg43955219	671 cg29142822	672 cg43988710	673 cg43988710	674 cg39516123
899 .	699	670	671	672	673	674

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5.1E-62	5.1E-62	5.1E-62	2.6E-61	1.70E-59	1.70E-59	1.70E-59
Human Gene Similar to SWISSPROT-ACC:Q04205 TENSIN - Gallus gallus (Chicken), 1744 aa.	Human Gene Similar to SWISSPROT-ACC:Q04205 TENSIN - Gallus galius (Chicken), 1744 aa.	Human Gene Similar to SWISSPROT-ACC:Q04205 TENSIN - Gallus gallus (Chicken), 1744 aa.	Human Gene Similar to SWISSPROT-ACC:Q99653 CALCIUM-BINDING PROTEIN P22 (CALCIUM-BINDING PROTEIN CHP) - Homo sapiens (Human), 194 aa.	Human Gene Similar to SPTREMBL-ACC:033196 HYPOTHETICAL 32.9 KD PROTEIN - MYCOBACTERIUM TUBERCULOSIS, 307 aa.	Human Gene Similar to SPTREMBL-ACC:033196 HYPOTHETICAL 32.9 KD PROTEIN - MYCOBACTERIUM TUBERCULOSIS, 307 aa.	Human Gene Similar to SPTREMBL-ACC:033196 HYPOTHETICAL 32.9 KD PROTEIN - MYCOBACTERIUM TUBERCULOSIS, 307 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT.	SILENT- CODING
Pro	Ala	Arg	Giy	Phe	Arg	Ser
Pro	Ala	Arg	Gly	Phe	Arg	Ser
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<u>ග</u>	O	O	 -	· -	V	U
452 CAGGCAGCCTG GGACAGCCCAG CCC[G/A]TCTGC CCAGAGAAACTA	563 TCAGCTCCTCTC C CGGAAAGCCAG GC[C/T]CGAGCT CAGTTCAGTGTG GCTGGCG	620 CGGTGCCTGGG AGCCCTCAGGC GCG[C/T]CACAG AACAGTGGGCA CCAACACTC	435 GGAAATGAGCC AAAGTTCGCATG AA[T/C]CCACGG AAGTTTACCTGG TCCTCTC	440 CCGGACAACAC CGTTGGAGTTCT TT[T/C]GCCGTCA ACGAGTTGTCTC TGGAAA	665 TGAGCGCTCAC GCTCTCTTTGCT CG[A/G]CCGCTG GTCATGAGCCCA GCTGCTC	680 TCTTTGCTCGAC CGCTGGTCATGA G[C/T]CCAGCTG CTCGAGTGGAC CTTGACA
452	563		435	440	999	980
675 cg39516123	676 cg39516123	cg39516123	678 cg42731307	679 cg44128084	680 cg44128084	681 cg44128084
675	676	677	678	679	089	681

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1.70E-59	1.70E-59	5.20E-58	5.20E-58	5.20E-58	1.70E-57	2.40E-57
UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:033196 HYPOTHETICAL 32.9 KD PROTEIN - MYCOBACTERIUM TUBERCULOSIS, 307 aa.	Human Gene Similar to SPTREMBL-ACC:033196 HYPOTHETICAL 32.9 KD PROTEIN - MYCOBACTERIUM TUBERCULOSIS, 307 aa.	Human Gene Similar to SPTREMBL-ACC:Q14185 DOCK180 PROTEIN -HOMO SAPIENS (HUMAN), 1865 aa.	Human Gene Similar to SPTREMBL-ACC:Q14185 DOCK180 PROTEIN -HOMO SAPIENS (HUMAN), 1865 aa.	Human Gene Similar to SPTREMBL-ACC:Q14185 DOCK180 PROTEIN -HOMO SAPIENS (HUMAN), 1865 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB43289 HYPOTHETICAL 12.7 KD PROTEIN - HOMO SAPIENS (HUMAN), 116 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:BAA83061 KIAA1109 PROTEIN -HOMO SAPIENS (HUMAN), 1957 aa (fragment).
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Val	- Se	Phe	Leu	Asn	Arg	Asn
Val	Ser	Phe	ren (Asn	Arg	Asn
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695 TGGTCATGAGCC CAGCTGCTCGA GT[G/A]GACCTT GACATCCAGCCA GACGGTT	728 ACATCCAGCCAG A ACGGTTCAGAAT C[A/G]GCGGTTC TGTGGTGCGAC GGGCGCC	289 CCACATACACA C CAGCATATACCT T[C/T]CCTGGGAT TCTCAAGTGGTT TGAAG	AACAGA CAGCCC SGAGAAT AGAAACC	382 CCATAGAAACCA C TGGAGCTGACC AA[C/T]GAGAGG ATCAGCAACTGT GTTCAGC	827 AGCTCGGGGAGT 1 ACAGGTGAAACT TC[T/G]CGAATTG CCTGTTCCTTCT TTCTGA	101 AAGGCCGACTTT C CTGTAGGAAGTA A[C/T]CGTGACC GAGAGATCAGC ATGTCTG
695	728	289	347	382	827	101
682 cg44128084	683 cg44128084	684 cg30455661	685 cg30455661	686 cg30455661	687 cg43302460	688 cg43153425
682	683	684	989	989	687	688

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2.40E-57	2.40E-57	2.40E-57	2.40E-57	2.40E-57	2.40E-57	2.40E-57
UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:BAA83061 KIAA1109 PROTEIN -HOMO SAPIENS (HUMAN), 1957 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:BAA83061 KIAA1109 PROTEIN -HOMO SAPIENS (HUMAN), 1957 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:BAA83061 KIAA1109 PROTEIN -HOMO SAPIENS (HUMAN), 1957 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:BAA83061 KIAA1109 PROTEIN - HOMO SAPIENS (HUMAN), 1957 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:BAA83061 KIAA1109 PROTEIN -HOMO SAPIENS (HUMAN), 1957 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:BAA83061 KIAA1109 PROTEIN -HOMO SAPIENS (HUMAN), 1957 aa (fragment).	UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:BAA83061 KIAA1109 PROTEIN -HOMO SAPIENS (HUMAN), 1957 aa (fragment).
UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS
SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT	SILENT- CODING	SILENT- CODING	SILENT. CODING
Asp	\sqr	Arg	<u>n</u>	Asp	Ç D	<u>e</u>
Asp	Val	Arg	Gin	Asp	Ser	<u>e</u>
–	<u> </u>	∢	V	F	H	H
U	O	g.	_G	U	O	⋖
107 GACTTTCTGTAG GAAGTAACCGTG A[C/T]CGAGAGA TCAGCATGTCTG TCGGTC	128 GTGACCGAGAG ATCAGCATGTCT GT[C/T]GGTCTG GGAAGGTCACA	TCAGCATGTCTG TCGGTCTGGGA AG[G/A]TCACAG TTAGACTCCAAA GGAGGAG	146 TGTCTGTCGGTC TGGGAAGGTCA CA[G/A]TTAGACT CCAAAGGAGGA GTAGTTG	152 TCGGTCTGGGA AGGTCACAGTTA GA[C/T]TCCAAAG GAGGAGTAGTT GGTGGGA	155 GTCTGGGAAGG TCACAGTTAGAC TC[C/T]AAAGGA GGAGTAGTTGGT GGGACCA	251 CAAATCAGCAAC CAAACCACAAAA T[A/T]CAAATTAC TATGGGTTCTAC TGAAT
10.	128	140	 	15,	15.	25
689 cg43153425	690 cg43153425	691 cg43153425	692 cg43153425	693 cg43153425	694 cg43153425	695 cg43153425
689	069	691	692	693	694	695

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2.40E-57	5.30E-56	3.30E-54	3.30E-54	3.30E-54	3.30E-54
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UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:BAA83061 KIAA1109 PROTEIN - HOMO SAPIENS (HUMAN), 1957 aa (fragment).	Human Gene Similar to SWISSPROT-ACC:P44788 SUN PROTEIN (FMU PROTEIN) - Haemophilus influenzae, 451 aa.	Human Gene Similar to SWISSPROT-ACC:P91343 HYPOTHETICAL 49.0 KD TRP-ASP REPEATS CONTAINING PROTEIN F55F8.5 IN CHROMOSOME I - Caenorhabditis elegans, 439 aa.	UNCLAS Human Gene Similar to SWISSPROT-SIFIED ACC:P91343 HYPOTHETICAL 49.0 KD TRP-ASP REPEATS CONTAINING PROTEIN F55F8.5 IN CHROMOSOME I - Caenorhabditis elegans, 439 aa.	Human Gene Similar to SWISSPROT-ACC:P91343 HYPOTHETICAL 49.0 KD TRP-ASP REPEATS CONTAINING PROTEIN F55F8.5 IN CHROMOSOME I - Caenorhabditis elegans, 439 aa.	Human Gene Similar to SWISSPROT-ACC:P91343 HYPOTHETICAL 49.0 KD TRP-ASP REPEATS CONTAINING PROTEIN F55F8.5 IN CHROMOSOME I - Caenorhabditis elegans, 439 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	SIFIED	UNCLAS
SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING
Asp	Th	gln	Tyr	g D	Ser
Asp	Thr	n B	۲۲ ۲	Glu Glu	Ser
	A		V	O	O
U	₀	O	ڻ ق	<u> </u>	<u>-</u>
287 TGGGTTCTACTG AATCTCGGGTTG A[C/T]TACATGGG CTCAAGCATCCT CATGG	40 CTTGCGCGGCA CCAGGCGGTAA GAC[G/A]ACCCA TATTTTAGAACT GGCACCTC	1289 GCTCTGGCTGG GGTGCAGTATAC TT[C/T]TCCACGT ATTCTATTTCCA CAACTT	1295 GCTGGGGTGCA GTATACTTCTCC AC[G/A]TATTCTA TTTCCACAACTT CTTCTG	1313 TCTCCACGTATT CTATTTCCACAA CIT/CITCTTCTGA TGAGATGTTCTC CATTT	1319 CGTATTCTATTT CCACAACTTCTT C[T/C]GATGAGAT GTTCTCCATTTC CATGT
287	40	1289	1295	1313	1319
696 cg43153425	697 cg30384142	698 cg44015614	699 cg44015614	700 cg44015614	701 cg44015614
969	269	869	669	700	701

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3.30E-54	3.30E-54	4.20E-54	6.10E-54	6.10E-54	6.10E-54
UNCLAS Human Gene Similar to SWISSPROT-SIFIED ACC:P91343 HYPOTHETICAL 49.0 KD TRP-ASP REPEATS CONTAINING PROTEIN F55F8.5 IN CHROMOSOME I - Caenorhabditis elegans, 439 aa.	Human Gene Similar to SWISSPROT-ACC:P91343 HYPOTHETICAL 49.0 KD TRP-ASP REPEATS CONTAINING PROTEIN F55F8.5 IN CHROMOSOME I - Caenorhabditis elegans, 439 aa.	Human Gene Similar to SPTREMBL- ACC:Q62739 RABIN3 - RATTUS NORVEGICUS (RAT), 460 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:046082 EG:63B12.2 PROTEIN -DROSOPHILA MELANOGASTER (FRUIT FLY), 254 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:046082 EG:63B12.2 PROTEIN -DROSOPHILA MELANOGASTER (FRUIT FLY), 254 aa.	Human Gene Similar to SPTREMBL-ACC:046082 EG:63B12.2 PROTEIN -DROSOPHILA MELANOGASTER (FRUIT FLY), 254 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS
SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT.	SILENT. CODING
<u>e</u>	<u>⊕</u>	Arg	Ala	Ser	Leu
e	<u>•</u>	Arg	Ala	Ser	Leu
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1325 CTATTTCCACAA CTTCTTCTGATG A[G/A]ATGTTCTC CATTTCCATGTG TTTGT	1379 AGGGCATTCGC AGAAACTGGCC CTT[A/G]ATAAGG AAATCAAACTCC ACATGTT	406 AGTCCAGGCAG GGGCCCACGTC CTC[T/C]CGGTA CACCTTTCCAG GAAGGGGC	425 TCTTCTCTAGAG TCCCGCGGCTC AC[A/G]GCCTTT GCTGCGAAGGG CAACTTGT	436 GTCCCGCGGCT CACAGCCTTTGC TG[C/G]GAAGGG CAACTTGTGGGC AACCTGG	463 AAGGGCAACTTG TGGGCAACCTG GT[C/T]AAGGAAA CCTTGACTTCTT CAAATT
1325	1379	406	425	436	463
702 cg44015614	703 cg44015614	704 cg42380652	705 cg43931038	706 cg43931038	707 cg43931038
702	703	704	705	706	707

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6.10E-54	6.10E-54	6.10E-54	6.10E-54	1.40E-53	3.50E-52	3.50E-52
6.1	6.1	6.1	6.	4.1	3.5	3.5
Human Gene Similar to SPTREMBL-ACC:046082 EG:63B12.2 PROTEIN - DROSOPHILA MELANOGASTER (FRUIT FLY), 254 aa.	Human Gene Similar to SPTREMBL-ACC:O46082 EG:63B12.2 PROTEIN -DROSOPHILA MELANOGASTER (FRUIT FLY), 254 aa.	Human Gene Similar to SPTREMBL-ACC:046082 EG:63B12.2 PROTEIN -DROSOPHILA MELANOGASTER (FRUIT FLY), 254 aa.	Human Gene Similar to SPTREMBL-ACC:O46082 EG:63B12.2 PROTEIN -DROSOPHILA MELANOGASTER (FRUIT FLY), 254 aa.	Human Gene Similar to SPTREMBL-ACC:045933 Y43F4B.4 -CAENORHABDITIS ELEGANS, 363 aa.	Human Gene Similar to SPTREMBL-ACC:043168 KIAA0443 - HOMOSAPIENS (HUMAN), 1395 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:043168 KIAA0443 - HOMO SAPIENS (HUMAN), 1395 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING	SILENT- CODING	SILENT. CODING
Val	ng Gl	Gly	Gly	Th	Glu	Asn
Val	n B	Gly	Gly	Й Ц	nlg	Asn
O	O	L	⋖	 -	⋖	O
					.5	*
469 AACTTGTGGGCA A ACCTGGTCAAG GA[A/C]ACCTTGA CTTCTTCAAATT CACAAC	478 GCAACCTGGTCA T AGGAAACCTTGA C[T/C]TCTTCAAA TTCACAACGCCC ACCCA	496 CCTTGACTTCTT C CAAATTCACAAC G[C/T]CCACCCA TCTCTACAACAA GGCGGC	562 TCACGTAGTGGT G CAATAGCACCTT T[G/A]CCTCCCC CCATGCGATGC	360 CATCATCTCCTG C AAGATGCTAGCA C[C/T]GTTCCTGT TATATTCCAACT CACTC	104 GAATTGGTTCTG G AGGAGTTTGAG GA[G/A]CTTCTTT TACTGATGGACA GAAATC	CCAGGGAAAGT T GCACAGCCAGA GAA[T/C]TGGTCT TGCAACTGCATC CAGTGTG
46	47.1	49(799	36	<u>0</u>	47
708 cg43931038	709 cg43931038	710 cg43931038	711 cg43931038	712 cg43338979	713 cg38450437	714 cg38450437
708	709	710	711	712	713	714

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1.60E-51	6.40E-51	1.30E-50	1.30E-50	1.30E-50	1.40E-50	1.30E-163
UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:AAD37447 BAW - FUGURUBRIPES (JAPANESE PUFFERFISH) (TAKIFUGURUBRIPES), 402 aa.	UNCLAS Human Gene Similar to SWISSNEW-SIFIED ACC:035775 SYNCOLLIN (SIP9) - Rattus norvegicus (Rat), 145 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB42016 PUTATIVE ADENYLOSUCCINATE SYNTHETASE - STREPTOMYCES COELICOLOR, 427 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB42016 PUTATIVE ADENYLOSUCCINATE SYNTHETASE - STREPTOMYCES COELICOLOR, 427 aa.	UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:CAB42016 PUTATIVE ADENYLOSUCCINATE SYNTHETASE - STREPTOMYCES COELICOLOR, 427 aa.	Human Gene Similar to SPTREMBL-ACC:Q92565 MYELOBLAST KIAA0277 - HOMO SAPIENS (HUMAN), 580 aa.	water_ch Human Gene SWISSPROT- annel ID:O14520 AQUAPORIN-7 LIKE (AQUAPORIN ADIPOSE) (AQPAP) - HOMO SAPIENS (HUMAN), 342 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	water_ch annel
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT. CODING
Leu	Th	Ĕ	Ser	ر آح	Phe	Ser
Leu	卢	тр	Ser	Š	Phe	Ser
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458 CCTTCCGGATGA CTTTCTCCGCAT C[C/T]TGCCCCA GCAGCTGGACA GCATACA	320 TCAAGCACTCGG ACGGGACGCGC AC[T/C]TGCGCC AAGCTCTATGAC AAGAGCG	563 ACCTCATCACCC CGTACCATCAGA C[C/T]CTCGACAA GGTCACTGAGC GTTTC	GTCGTGGCATC GGGCCGACCTA CTC[T/C]GACAA GATCAATCGGAT GGGTATTC	662 ACTCTGACAAGA TCAATCGGATGG G[T/C]ATTCGCGT CCAGGATCTTTT CGACG	TCATCGACAACC AGAACCTCCTCT T[T/C]GAGCTCTC CTACAAGCTGGA GGCAA	138 CTGAAGATCTGT TGGCAGGGCTC AC[A/G]GAGACG GGGGTGAGGGG AGAGATCG
458	320	563	641	662		138
715 cg43314946	716 cg44010070	717 cg39380052	718 cg39380052	719 cg39380052	720 cg43329819	721 cg43298242
715	716	717	718	719	720	721

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	-	12	19
1.30E-163	2.30E-212	2.20E-58	0.00E+00
1.30	2.306	2.2	0.00
water_ch Human Gene SWISSPROT- annel ID:O14520 AQUAPORIN-7 LIKE (AQUAPORIN ADIPOSE) (AQPAP) - HOMO SAPIENS (HUMAN), 342 aa.	Human Gene SWISSNEW-ID:092785 ZINC-FINGER PROTEIN UBI-D4 (APOPTOSIS RESPONSE ZINC FINGER PROTEIN REQUIEM) - HOMO SAPIENS (HUMAN), 391 aa. pcis:SWISSPROT-ID:092785 ZINC-FINGER PROTEIN UBI-D4 (APOPTOSIS RESPONSE ZINC FINGER PROTEIN REQUIEM) - HOMO SAPIENS (HUMAN), 391 aa.	ATPase_ Human Gene Similar to SWISSPROT- associate ID:Q16864 VACUOLAR ATP d SYNTHASE SUBUNIT F (EC 3.6.1.34) (V-ATPASE F SUBUNIT) (V-ATPASE 14 KD SUBUNIT) - HOMO SAPIENS (HUMAN), 119 aa.	Human Gene SPTREMBL-ID:Q15065 OB-CADHERIN-1 - HOMO SAPIENS (HUMAN), 796 aa.
water_ch annel	apoptosi s	ATPase_ associate d	cadherin
SILENT- CODING	CONSERVATI apoptosi VE	CONSERVATI ATPase_ VE associate d	CONSERVATI cadherin VE
Leu	Val (1096)	Arg (1097)	Val (1098)
пел	Ala	E	- Ala
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g		L	_o
150 TGGCAGGGCTC ACAGAGACGGG GGT[G/A]AGGGGG AGATCGTGG GTTCATGAG	ISOI GGAGTTCTGGTT CTGGTAGATGGA A[G/A]CTTTCTCT TTCAACAGGTCC AGACA	460 GGAGTCCTTGG CGGCGTCATATG GG[T/C]GCTCCT TGGAGGGGATC TCCAGGAC	2923 TGAGGGGAGCG (CCCGGCGGCGCGCGGGGGGGGGGGGGGG
150	1501	460	2923
722 cg43298242	723 cg43970780	724 cg43957906	725 cg43952088
722	723	724	725

3 (3q13.1)	1 (1q32)	5 (5q13.3)	55
1.20E-167	1.10E-69	2.60E-172	2.40E-52
Human Gene SWISSNEW-ID:Q08722 LEUKOCYTE SURFACE ANTIGEN CD47 PRECURSOR (ANTIGENIC SURFACE DETERMINANT PROTEIN OA3) (INTEGRIN ASSOCIATED PROTEIN) (IAP) (MER6) - HOMO SAPIENS (HUMAN), 323 aa. Ipcls:SWISSPROT-ID:Q08722 LEUKOCYTE SURFACE ANTIGEN CD47 PRECURSOR (ANTIGENIC SURFACE DETERMINANT PROTEIN OA3) (INTEGRIN ASSOCIATED PROTEIN) (IAP) (MER6) - HOMO SAPIENS (HUMAN), 323 aa.	complem Human Gene Similar to TREMBLNEW-entrecept ID:E246058 COMPLEMENT RECEPTOR 2 - MUS MUSCULUS (MOUSE), 651 aa (fragment).	Human Gene SWISSPROT- ID:P51946 CYCLIN H (MO15- ASSOCIATED PROTEIN) (P37) (P34) HOMO SAPIENS (HUMAN), 323 aa.	Human Gene Similar to SPTREMBL- ID:000761 CYTOCHROME OXIDASE SUBUNIT VIA HEART ISOFORM PRECURSOR (EC 1.9.3.1) (CYTOCHROME-C OXIDASE) (CYTOCHROME A(3)) (CYTOCHROME AA(3)) - HOMO SAPIENS (HUMAN), 97 aa.
cadherin	complem entrecept	cyclin	cytochro me
CONSERVATI cadherin VE	CONSERVATI VE	CONSERVATI cyclin	CONSERVATI VE
(1099)	His (1100)	Ala (1101)	Val (1102)
<u>e</u>	Arg	\ag	Ala
<u>5</u>	-	O	∢
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613 ACTCCTGTTCTG GGGACAGTTTG GT[A/G]TTAAAAC ACTTAAATATAG ATCCGG	1327 TTCCCCATGTGA AACATCTGGCTT G[C/T]GACAGGT GATTTTTCACA GGTAGG	987 TATGAACCACCC AGATCTGAAGAA G[T/C]TGCTGTTC TGAACAGAAGT TGGAG	291 TCCTGCTCCTCC GTGGCCTCCTTT G[G/A]CAGCGCT GGCCAAGCCCC GGGTCAG
616 E	1327	987	291
726 cg43956666	727 cg43942011	728 cg43973728	729 cg44017721
726	727	728	729

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0.00E+00	0.00E+00	1.00E-234	3.30E-307	0.00E+00
0.0	0.0	1.00	3.30	
dna_rna_ Human Gene SWISSPROT- bind ID:014647 CHROMODOMAIN- HELICASE-DNA-BINDING PROTEIN 2 (CHD-2) - HOMO SAPIENS (HUMAN), 1739 aa.	glycoprot Human Gene SWISSPROT- ein ID:P08183 MULTIDRUG RESISTANCE PROTEIN 1 (P- GLYCOPROTEIN 1) - HOMO SAPIENS (HUMAN), 1280 aa.	CONSERVATI glycoprot Human Gene SPTREMBL-ID:Q61003 VE ein T CELL SURFACE GLYCOPROTEIN CD6 - MUS MUSCULUS (MOUSE), 665 aa.	Human Gene SWISSPROT- ID:014232 PUTATIVE HELICASE C6F12.16 IN CHROMOSOME I - SCHIZOSACCHAROMYCES POMBE (FISSION YEAST), 1117 aa.	CONSERVATI interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa.[pcls:SPTREMBL-ID:Q16666 IF116=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).
dna_ma_ bind	glycoprot	glycoprot ein	helicase	interferon
CONSERVATI	CONSERVATI	CONSERVATI	CONSERVATI helicase	VE
Ala (Asp ((1104)	Ala (1105)	Gly (1106) \	(1107)
Gly.	Asn	Val	رعا ا	Arg
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O	<	-	⊢	O
5428 CAAAAGAAGAAA GACGACGTGAC TG[G/C]GGGTAA GAAACCATTTCG TCCAGAG	485 GAAGAAGACTT TTTTAAACTGAA C[A/G]ATAAAAGT GAAAAAGATAAG AAGGA	890 TGCGGCCACAA AGAGGACGCGG GCG[T/C]GGTGT GCTCAGAGCAC CAGTCCTGG	2546 CGAGAACTGAA GAAAGCAAGAAC AG[T/G]CCTACAA ATGGATGAACTC AAATGT	2360 AATCTGAATTTT GTCATACTCTTC T[C/T]TCATTTTTA AATTAAGTTTTAA ATC
5428	485	068	2546	2360
730 c943273880	731 cg43992911	732 cg41029366	733 cg43931167	734 cg43925670
730	731	732	733	734

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0.00E+00	0.00E+00	3.00E-187
•		3.00
CONSERVATI interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa.[pcls:SPTREMBL-ID:Q16666 IF16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).	Human Gene SWISSNEW-ID:000329 PHOSPHATIDYLINOSITOL 3-KINASE CATALYTIC SUBUNIT, DELTA ISOFORM (EC 2.7.1.137) (PI3- KINASE P110 SUBUNIT DELTA) (PTDINS-3-KINASE P110) (PI3K) (P110DELTA) - HOMO SAPIENS (HUMAN), 1044 aa. pcis:SWISSPROT- ID:000329 PHOSPHATIDYLINOSITOL 3-KINASE CATALYTIC SUBUNIT, DELTA ISOFORM (EC 2.7.1.137) (PI3- KINASE P110 SUBUNIT DELTA) (PTDINS-3-KINASE P110) (PI3K) (P110DELTA) - HOMO SAPIENS (HUMAN), 1044 aa. pcis:SPTREMBL- ID:000329 PHOSPHOINOSITIDE 3- KINASE - HOMO SAPIENS (HUMAN), 1044 aa.	Human Gene SPTREMBL-ID:Q12792 PROTEIN TYROSINE KINASE - HOMO SAPIENS (HUMAN), 350 aa.
interferon	kinase	kinase
CONSERVATI	CONSERVATI kinase	CONSERVATI kinase VE
(1108)	Asn (1109)	Val (1110)
gig	Asp	<u>o</u>
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2474 TAGAACAATGTT CTTGTATTTTTTT [C/G]CCATCTTTA CAGACATAAGTG AGCC	AATTGGCACATC TTGGCGCGAAA GT[C/T]GTTCACT TCTGGGTCGCA CAAGGAG	409 GAAGAAGGAATT / TGAAGGTGGCC AC[A/G]TTAAAGA TGAAGTATTGG AACAGT
2474	4637	409
735 cg43925670	736 cg43928549	737 cg42703622
735	736	737

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7.80E-173	2.70E-51	7.80E-86	2.60E-50	0.00E+00
Human Gene SPTREMBL-ID:Q15599 TYROSINE KINASE ACTIVATOR PROTEIN 1 (TKA-1) - HOMO SAPIENS (HUMAN), 450 aa.	Human Gene Similar to SWISSPROT-ID:P46546 GLUTAMATE 5-KINASE (EC 2.7.2.11) (GAMMA-GLUTAMYL KINASE) (GK) -CORYNEBACTERIUM GLUTAMICUM, 369 aa.	kinaseinh Human Gene Similar to SWISSPROT- ibitor ID:P42773 CYCLIN-DEPENDENT KINASE 6 INHIBITOR (P18-INK6) - HOMO SAPIENS (HUMAN), 168 aa.	Human Gene Similar to SWISSNEW- ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE] - HOMO SAPIENS (HUMAN), 874 aa.jpcis:SWISSPROT-ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE) - HOMO SAPIENS (HUMAN), 874 aa.	Human Gene SWISSPROT- ID:P15498 VAV PROTO-ONCOGENE HOMO SAPIENS (HUMAN), 846 aa.
kinase	kinase	kinaseinh ibitor	nuclease	oncogen e
CONSERVATI kinase	CONSERVATI VE	CONSERVATI VE	CONSERVATI nuclease	CONSERVATI VE
Val (1111)	(1112)	Asn (1113)	(1114)	Val (1115)
r .	nen	Asp	Asp.	Ala
o o		-	-	⊢
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925 CTCTGCGTGCTC GTCCGAAGTG AC[C/G]TGCCTG GTTCCGACAAG GACACTGA	394 CAGGTGGCCATT CGGGCGGCTTC AA(G/TJTTTCGTG GTCATGCCGCC GGTTCCC	702 GCGAAACCAGTT CGGTCTTTCAAA T[C/T]GGGATTAG CACCTCTAAGTA GCAGT	290 ATATTGCCTAGT AATTTCTGATAAT [C/T]ATTTAAGGT ATGTAAGTTGCT AGTA	CACTTCCTAAAG GAGATGAAGGA AGIC/TJCCTGGG CACCCCTGGCG CAGCCAAT
925	394	702	290	864
738 cg44131752	739 cg25143358	740 cg43105476	741 cg38642684	742 cg39518465
738	739	740	741	742

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0.00E+00	1.20E-64	8.90E-172	0.00E+00	4.3E-188
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Human Gene SWISSPROT- ID:Q16849 PROTEIN-TYROSINE PHOSPHATASE N PRECURSOR (EC 3.1.3.48) (R-PTP-N) (PTP IA-2) (ISLET CELL ANTIGEN 512) (ICA 512) (ISLET CELL AUTOANTIGEN 3) -	Human Gene Similar to TREMBLNEW ID:D1024666 PROTEIN-TYROSINE- PHOSPHATASE (EC 3.1.3.48) - MUS MUSCULUS (MOUSE), 426 aa.	Human Gene SWISSNEW-ID:054888 DNA-DIRECTED RNA POLYMERASE I 135 KD POLYPEPTIDE (EC 2.7.7.6) (RNA POLYMERASE I SUBUNIT 2) (RPA135) (RNA POLYMERASE I 127 KD SUBUNIT) - RATTUS NORVEGICUS (RAT), 1135 aa. picls:TREMBLNEW-ID:G2739048 RNA POLYMERASE I 127 KDA SUBUNIT - RATTUS NORVEGICUS (RAT), 1135 aa.	N C	Human Gene SWISSNEW-ID:P40121 MACROPHAGE CAPPING PROTEIN (ACTIN-REGULATORY PROTEIN CAP-G) - HOMO SAPIENS (HUMAN), 348 aa. [pcls:SWISSPROT-ID:P40121 MACROPHAGE CAPPING PROTEIN (ACTIN-REGULATORY PROTEIN CAP-G) - HOMO SAPIENS (HUMAN), 348 aa.
Human Gene SWISSPROT-ID:Q16849 PROTEIN-TYROSINE PHOSPHATASE N PRECURSOR (E 3.1.3.48) (R-PTP-N) (PTP IA-2) (ISLET CELL ANTIGEN 512) (ICA 512) (ISLET CELL AUTOANTIGEN 512) HOMO SAPIENS (HUMAN), 979 aa.	Human Gene Similar to TREME ID:D1024666 PROTEIN-TYRO3 PHOSPHATASE (EC 3:1.3.48) MUSCULUS (MOUSE), 426 aa	Human Gene SWISSNEW-ID:05486 DNA-DIRECTED RNA POLYMERAS I 135 KD POLYPEPTIDE (EC 2.7.7.6 (RNA POLYMERASE I SUBUNIT 2) (RPA135) (RNA POLYMERASE I 12 KD SUBUNIT) - RATTUS NORVEGICUS (RAT), 1135 aa. pcls:TREMBLNEW-ID:G2739046 RNA POLYMERASE I 127 KDA SUBUNIT - RATTUS NORVEGICUS (RAT), 1135 aa.	Human Gene TREMBLNEW- ID:G2920823 CARDIAC MYOSIN BINDING PROTEIN-C - HOMO SAPIENS (HUMAN), 1274 aa.	Human Gene SWISSNEW-ID:P40 MACROPHAGE CAPPING PROTE (ACTIN-REGULATORY PROTEIN CAP-G) - HOMO SAPIENS (HUMA 348 aa. [pcls:SWISSPROT-ID:P401 MACROPHAGE CAPPING PROTEIN (ACTIN-REGULATORY PROTEIN CAP-G) - HOMO SAPIENS (HUMA 348 aa.
SPRC IN-TY PREC (PTF SEN (AUTO AUTO	ar to T TEIN-7 CC 3.1 SE), 4	Human Gene SWISSNEW-II DNA-DIRECTED RNA POLY I 135 KD POLYPEPTIDE (E' (RNA POLYMERASE I SUB (RPA135) (RNA POLYMER/ KD SUBUNIT) - RATTUS NORVEGICUS (RAT), 1135 aa. picls:TREMBLNEW-ID:G' RNA POLYMERASE I 127 K SUBUNIT - RATTUS NORVI (RAT), 1135 aa.	Human Gene TREMBLNEW-ID:G2920823 CARDIAC MYOBINDING PROTEIN-C - HOMSAPIENS (HUMAN), 1274 aa	SSNEV VPPIN APIEN SPRO SPRO SPRO SPRO APIEN
SWIS ROTE SEN TP-N ANTIC	Similk PROJ SE (E	SWIS YPEF YPEF IERAS IA PC S (RA ABLNI ABLNI ATTU	TREN CARI OTEIN JMAN	SWIS JLATO MO SA SWISS SE CA MO SA
Gene 49 Pr HATA HATA (R-F CELL LET (Gene 4666 HATA ILUS	Human Gene S DNA-DIRECTEI 135 KD POLY (RNA POLYME (RPA135) (RNA KD SUBUNIT) - NORVEGICUS aa. pcls:TREME RNA POLYMEF SUBUNIT - RA1 (RAT), 1135 aa.	Gene 20823 G PR(IS (HL	Gene PHA(PEGI - HOI pcls:5 PHA(- HOI
1.3.48 1.3.48 1.3.48 3.LET 2) (IS	iman D102 HOSP USCU	Iman 135 KE 135 KE NA Po 150 SUB 160 SUB 160 SUB 170 PC 180 NA PC 180 NA PC	iman :G292 NDIN APIEN	Human MACRC (ACTIN- CAP-G) 348 aa. MACRC (ACTIN- CAP-G) 348 aa.
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CONSERVATI phosphat Human Gene SWISSPROT VE ID:Q16849 PROTEIN-TYRC BHOSPHATASE N PRECU 3.1.3.48) (R-PTP-N) (PTP II (ISLET CELL ANTIGEN 512 512) (ISLET CELL AUTOAN HOMO SAPIENS (HUMAN)	phosphat Human Gene Similar to TREMBLNEWase ID:D1024666 PROTEIN-TYROSINE-PHOSPHATASE (EC 3.1.3.48) - MUS MUSCULUS (MOUSE), 426 aa.	polymera Human Gene SWISSNEW-ID:054888 BNA-DIRECTED RNA POLYMERASE 1135 KD POLYPEPTIDE (EC 2.7.6) (RNA POLYMERASE I SUBUNIT 2) (RPA135) (RNA POLYMERASE I 127 KD SUBUNIT) - RATTUS NORVEGICUS (RAT), 1135 aa. pcls:TREMBLNEW-ID:G2739048 RNA POLYMERASE I 127 KDA SUBUNIT - RATTUS NORVEGICUS (RAT), 1135 aa.	CONSERVATI struct	struct
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(1116)	lle (1117)	(1118)	His (1119)	(1120)
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GCCC GCAC GCAC GGCT GA	GGA CTAC CACT	SCCT AAGA CCAG TCCG A	ATCT ATTT ATTT TCT	GAAG GAAG GCCC CTTG GC
CAGCCGCCGG GGGGCTGCAGC GCCGACGGCTG GCCCACGGCTG TCTATTGA	CAATTGTGGAGA AGAGTATTTTAT [G/A]TCGCTACTC AAGGACCACTG CTGAG	CAACCAGCCTAT TGGGGGAAGAA ATG/AJTCCAGG GTGGAATCCGTT TTGGGGA	GGTTATCAGGAA CTTGGGATCTTC A[C/T]GGATTTCC ATCTTGTTCTTC ATCCA	AGGTAGGAGTC CCCCGAGAGAA AGA[C/T]GCCCT GGTTCTCTTGCG CCACAGGC
176 CAGCCGCCCGG GGGGCTGCAGC GCC[G/A]TTAGT GCCCACGGCTG TCTATTGA	365 CAATTGTGGAGA AGAGTATTTTTAT [G/AJTCGCTACTC AAGGACCACTG CTGAG		GGTTA CTTGG A[C/T]G ATCTTC ATCCA	1113 AGGTAGGAGTO CCCCGAGAAGA AGA[C/T]GCCCT GGTTCTCTTGC CCACAGGC
71	jğ 	851	316	111
1380	3924	0490	1078	3919
4302	39728	4271(4400	4391(
743 cg43021380	744 cg39728924	745 cg42710490	746 cg44001078	747 cg43916919
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(11p15.5					(F)
1E-92	4E-80	6E-55	6E-55	7.3E-106	2.7E-202
Human Gene Similar to SWISSPROT-ID:P48788 TROPONIN I, FAST SKELETAL MUSCLE (TROPONIN I, FAST-TWITCH ISOFORM) - HOMO SAPIENS (HUMAN), 181 aa.	Human Gene Similar to SWISSPROT- ID:Q28046 ADSEVERIN (SCINDERIN) (SC) - BOS TAURUS (BOVINE), 715 aa.	Human Gene Similar to SWISSPROT-ID:P07313 MYOSIN LIGHT CHAIN KINASE, SKELETAL MUSCLE (EC 2.7.1.117) (MLCK) - ORYCTOLAGUS CUNICULUS (RABBIT), 607 aa.	Human Gene Similar to SWISSPROT-ID:P07313 MYOSIN LIGHT CHAIN KINASE, SKELETAL MUSCLE (EC 2.7.1.117) (MLCK) - ORYCTOLAGUS CUNICULUS (RABBIT), 607 aa.	Human Gene Homologous to SWISSPROT-ID:Q02038 NEUROLYSIN PRECURSOR (EC 3.4.24.16) (NEUROTENSIN ENDOPEPTIDASE) (MITOCHONDRIAL OLIGOPEPTIDASE M) (MICROSOMAL ENDOPEPTIDASE) (MEP) (SOLUBLE ANGIOTENSIN- BINDING PROTEIN) (SABP) - SUS SCROFA (PIG), 704 aa.	CONSERVATI transcript Human Gene SWISSPROT- VE factor ID:Q14188 TRANSCRIPTION FACTOR DP-2 (E2F DIMERIZATION PARTNER 2) - HOMO SAPIENS (HUMAN), 385 aa.
struct	struct	struct	struct	tm7	transcript factor
CONSERVATI struct	CONSERVATI struct	CONSERVATI VE	CONSERVATI VE	CONSERVATI tm7	CONSERVATI
Lys (1121)	Arg (1122)	(1123)	(1124)	Thr (1125)	Val (1126)
Arg	s 토	Val	Val	ğ.	<u>e</u>
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463 CAGCTCCTTGCT GGTCTTCTGCAC C[C/T]TCACCTCC ATGTCGTACTTC TCCTC	230 AAGACGAGCCG / AGGCTTCACCTA CC[A/G]CCTGCA CTTCTGGCTCGG AAAGGAG	377 CAACATCATGAA (CCAGCTCAGCC AC[G/A]TAAACTT GATCCAACTTTA TGATGC	GTACCACCTCAC TGAGTTGGATGT G[G/A]TCTTGTTC ACGAGGCAGAT CTGTGA	TGCAAGTGAATA TGCCAAATACTG CIT/AJCAGAAATA TTAGGAGTTGCA GCTAC	GTTAGTCTCTGT GGTGTGCTTATA A[T/C]CATTTGGG GTCCAACATTCA CATTT
463	230	377	509	- 481	2201
748 cg42930605	749 cg36824552	750 cg42522566	751 cg42522566	752 cg42489842	753 cg43919398
748	749	750	751	752	753

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1.7E-53	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CONSERVATI transcript Human Gene Similar to SPTREMBL-VE factor ID:008996 MYELIN TRANSCRIPTION FACTOR 1-LIKE - MUS MUSCULUS (MOUSE), 1182 aa.	Human Gene TREMBLNEW- ID:G2827198 UBIQUITIN PROTEIN LIGASE - MUS MUSCULUS (MOUSE), 854 aa.	Human Gene SWISSPROT- ACC:Q93075 HYPOTHETICAL PROTEIN KIAA0218 - Homo sapiens (Human), 761 aa.	Human Gene TREMBLNEW- ACC:BAA74849 KIAA0826 PROTEIN - HOMO SAPIENS (HUMAN), 1236 aa (fragment).	UNCLAS Human Gene SPTREMBL- SIFIED ACC:075176 KIAA0692 PROTEIN - HOMO SAPIENS (HUMAN), 783 aa (fragment).	Human Gene SPTREMBL- ACC:000566 M PHASE PHOSPHOPROTEIN 10 - HOMO SAPIENS (HUMAN), 672 aa (fragment).	
transcript factor	ubiquitin	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED
CONSERVATI VE	CONSERVATI ubiquitin VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI
Ser (1127)	Asn (1128)	Arg (1129)	Asn (1130)	Val (1131)	Arg (1132)	Ser (1133)
Thr	Asp	SH SH	Asp	Ala	Lys	Thr
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300 ATGGAGGCGGC CCACATGGCGG CCACATGCGCG TCCTCAACCTGT CCACGCGC	1474 GGCTCTGTTCCA TGGGAAATTCAT A[G/A]ACACGGG TTTTCTTTACCA TTCTA	GGCTGGTCCTTC TCCATGGCTGG GA[T/C]GCTCTG CTGCGCTTGGTT TTGCCCG	GCTTCTCTTTTC ACATTGTATGTA T[C/T]CAGGTGTT CTTGCAACTCCA	2637 GCTCATGTCATC TTCATCTAGAAA CIG/AJCCCTCAC GGAAATGGAATT	1186 TCTTTCAAGCT TTCTTTATGTTGT [I/C]TATTGTCTT CATTTCTTGAA GGTC	794 AGCCAGAGGCT GGTACCTAGAAC CA[G/C]TGGATG GTTTCTTGGCTG ATGGCGC
300	1474	3784	2735	2637	1186	794
754 cg20612302	755 cg44928196	756 cg43301812	757 cg43917191	758 cg43918356	759 cg43932090	760 cg43950437
754	755	756	757	758	759	760

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1.00E-274	5.30E-253	2.00E-237	2.00E-237	2.80E-215	2.00E-207
Human Gene SWISSNEW- ACC:Q12774 PROBABLE GUANINE NUCLEOTIDE REGULATORY PROTEIN TIM (ONCOGENE TIM) (P60 TIM) (TRANSFORMING IMMORTALIZED MAMMARY ONCOGENE) - Homo sapiens (Human), 519 aa.	Human Gene SPTREMBL- ACC:Q13283 GAP SH3 BINDING PROTEIN - HOMO SAPIENS (HUMAN), 466 aa.	Human Gene SWISSPROT- ACC:P42167 THYMOPOIETINS BETA AND GAMMA (TP BETA AND TP GAMMA) - Homo sapiens (Human), 453 aa.	UNCLAS Human Gene SWISSPROT- SIFIED ACC:P42167 THYMOPOIETINS BETA AND GAMMA (TP BETA AND TP GAMMA) - Homo sapiens (Human), 453 aa.	UNCLAS Human Gene SPTREMBL- SIFIED ACC:015417 CAGL79 - HOMO SAPIENS (HUMAN), 413 aa (fragment).	UNCLAS Human Gene TREMBLNEW- SIFIED ACC:AAD34036 CGI-40 PROTEIN - HOMO SAPIENS (HUMAN), 845 aa.
SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS
CONSERVATI VE	CONSERVATI VE	CONSERVATI	CONSERVATI VE	CONSERVATI VE	CONSERVATI
Ala (1134)	Ala (1135)	Ala (1136)	Val (1137)	Thr (1138)	Val (1139)
Na N	Val	Val	9	Ser.	<u>=</u>
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∢	4	⋖	⊥	O	⋖
743 GCCTCGCTCCC CGTCTGAGAGC CTC[A/G]CGCCC TCCAGCCAGCC GTCACTGCT	TCCATTTGAATC CAATCCCCCATG G[A/G]CATAAGA AGAGTTCTTTCC ATAAAA	CTTGAAATTTCC AGTCACCCTATT G[A/G]CAACTAA GGATTCGTTGCT TGAAGC	1783 CCACTTGTCCAT TCAGTCTCAGTT A[7/C]TCCAGCTT GAGAATAGCTCT GATTG	282 GGCCGCGGGGGG GATAGCTGCCCA GG[C/G]TCAGGA GGCTCTTGGGCT CCTGCCA	1121 CACGGCGTTCT GGATCGTCTTCT CC[A/G]TCATTCA CATCATCGCCAC CCTGCT
743	2578	1581	1783	282	1121
761 cg42935995	762 cg43971614	763 cg43922856	764 cg43922856	765 cg43955639	766 cg41022625
761	762	763	764	765	766

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2.30E-190	1.90E-138	3.70E-133	4.00E-129	3.20E-127	9.00E-111
Human Gene TREMBLNEW- ACC:CAA75235 LACTOSYLCERAMIDE ALPHA-2,3- SIALYLTRANSFERASE (EC 2.4.99.9) MUS MUSCULUS (MOUSE), 387 aa.	Human Gene Homologous to SPTREMBL-ACC:093263 AVENA - GALLUS GALLUS (CHICKEN), 550 aa.	Human Gene Homologous to TREMBLNEW-ACC:BAA74876 KIAA0853 PROTEIN - HOMO SAPIENS (HUMAN), 967 aa (fragment).	Human Gene Homologous to TREMBLNEW-ACC:AAD39906 FH1/FH2 DOMAIN-CONTAINING PROTEIN FHOS - HOMO SAPIENS (HUMAN), 1164 aa.	Human Gene Homologous to SPTREMBL-ACC:Q03626 ALPHA-1- INHIBITOR III PRECURSOR, ISOFORM 2 (RAT PLASMA PROTEINASE INHIBITOR ALPHA-1- INHIBITOR III GROUP 3 VARIANT 36A) (ALPHA-1 PROTEINASE INHIBITOR 3, EXONS 1-4) - RATTUS NORVEGICUS (RAT), 1487 aa.	Human Gene Homologous to TREMBLNEW-ACC:CAB40416 P24B PROTEIN PRECURSOR - HOMO SAPIENS (HUMAN), 217 aa.
UNCLAS	UNCLAS	UNCLAS	SIFIED	UNCLAS	UNCLAS
CONSERVATI	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI	CONSERVATI VE
lle (1140)	Glu (1141)	His (1142)	Asp (1143)	Asp (1144)	Glu (1145)
Val	Gin	Arg	Glu	n Ö	Asp
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1960 TGAGCATAGCTC TGAGCTCTCTTT A[C/T]ACGGTCA GGGTCCACATAA TGCATT	1109 AGAACGAGAGA GGCTGGAGAGA CTG[C/G]AACGG GAGAGGCAAGA AAGGGAGCG	531 GTCTTTGTCTTC CCAATCCCTTTG G[C/T]GTTCTCGT TCTTTATCCCTTT CTCT	473 AGCTGTATAGCT CCAGTGGTCCT GA[G/T]CTCCGC CGCTCCCTCTTC TCACTGA	333 CTGCCCAGCCA GCCCCATCCCCT GA[G/T]GACCTG GCTTTGTCATG GGCACCA	987 CCATGTCTGGGA GAATGGGAGCC TC[A/C]TCGCCC ACTTGAAAGTCA AAGTAGA
1960	1109	531	473	333	987
767 cg43119894	768 cg43303845	769 cg44927166	770 cg38059286	771 cg29351416	772 cg43960639
767	768	769	770	177	772

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N	<u></u>	7 (12q24.1		(4q21.1)	
4.80E-110	1.10E-108	2.60E-102	1.20E-98	5.90E-96	6.30E-89
		2.6			
Human Gene Homologous to TREMBLNEW-ACC:AAD43195 PEROXISOMAL MEMBRANE PROTEIN PMP 24 - HOMO SAPIENS (HUMAN), 212 aa.	Human Gene Homologous to SWISSPROT-ACC:P50461 LIM DOMAIN PROTEIN, CARDIAC (MUSCLE LIM PROTEIN) (CYSTEINE- RICH PROTEIN 3) (CRP3) (LIM-ONLY PROTEIN 4) - Homo sapiens (Human), 194 aa.	Human Gene Homologous to SPTREMBL-ACC:Q13845 BCL7B PROTEIN - HOMO SAPIENS (HUMAN), 202 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICAL PROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SWISSPROT-ACC:P47710 ALPHA-S1 CASEIN PRECURSOR - Homo sapiens (Human), 185 aa.	Human Gene Similar to TREMBLNEW- ACC:BAA74913 KIAA0890 PROTEIN - HOMO SAPIENS (HUMAN), 1194 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
CONSERVATI UNCLAS VE SIFIED	CONSERVATI	CONSERVATI VE	CONSERVATI	CONSERVATI VE	CONSERVATI VE
Val (1146)	Val (1147)	Thr (1148)	Phe (1149)	Val (1150)	Leu (1151)
Ala	Ala	Ser	TyT	Ala	Val
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1098 GTGGATATATGT GGCCTGCAGTAT G[G/A]CCCACAG CTTCTCCTGGAG GCTGCC	853 GCCACCTCCCAT AACCTTCTCAGC A[G/A]CATAGACT GACTTGCCACAT CGAGG	1374 AAGCCATTAGGT TCTCGGGCTGCT G[A/TJACTGTTCG ATTTTGACTTTTC	CCAGGCTGTGC CGTTCCACTTCT GA[T/A]ATTCCCC TCCCGCGATAA CCAGGT	584 TCTGCAAATTTG CTCCTGGGCAT GG[G/A]CAGCTT GCAGCTGAAGTT GCAGCTGAAGTT	361 CGGCGCCGTC ATCACGGATGTG CA[C/A]GTCCCC GTCGGTCAGCA GCAGCACA
109	853	137	508	289	.96
773 cg43325007	774 cg42907145	775 cg43972159	776 cg39512856	777 cg28461713	778 cg43969092
773	774	775	776	777	778

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1.90E-83	7.20E-75	7.20E-75	7.20E-75	2.40E-74	1.10E-71	2.00E-71
UNCLAS Human Gene Similar to SWISSNEW- SIFIED ACC:Q02380 NADH-UBIQUINONE OXIDOREDUCTASE SGDH SUBUNIT PRECURSOR (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-SGDH) (CI- SGDH) - Bos taurus (Bovine), 189 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:BAA74845 KIAA0822 PROTEIN -HOMO SAPIENS (HUMAN), 1581 aa.	Human Gene Similar to SPTREMBL- ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q23382 ZK1058.4 -CAENORHABDITIS ELEGANS, 442 aa.
UNCLAS	SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS	UNCLAS
CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE
lle (1152)	Val (1153)	Arg (1154)	Gin (1155)	Tyr (1156)	Asn (1157)	Arg (1158)
Val	Ala	His	ng	Phe	Asp	Lys
H	⊢	<u>o</u>	O	⊢ ·	⋖	0
O	O	⋖	<u>ග</u>	⋖	් ග	⊢
487 GCGTCATAGTAT AAAGAAGGCTTG A[C/T]GACAAACA GTCTCTTGCCAT GGTCC	603 GACGCGTTGGTT CCCGACGAAGA CG[C/T]CCGAGC GGCCAAGTGGG CGGTGGCG	ATGGACGTGGT GCGCAACAGCC CTC[A/G]CGGAG TGAAGGTCCAGA TGGCTCTT	857 CCAGATGGCTCT TTCCGCCTGGC CC[G/C]AGCTCG ATCAGGCATCAA GGTGCCT	274 AACCACAGAGAA TACAGTGACAAC A[A/T]AGAAACAA AATGACCAAATG CCACT	544 GTTGTTTAACTT AAGCAATTTTTT G[G/A]ATAAAAGT GGATTGCAAGG ATATGA	2850 AACATCAACAAT CGTTATTGGGTC T[I/C]TATTTTG CTAGAAGAAGTA TCTGG
487	603	819	857	274	544	2850
779 cg42688841	780 cg39523553	cg39523553	782 cg39523553	783 cg35933325	784 cg41677120	785 cg43951096
779	780	781	782	783	784	785

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1.40E-69	1.30E-68	1.30E-68	2.30E-68	2.30E-68	5.80E-66
Human Gene Similar to SWISSPROT-ACC:P55789 AUGMENTER OF LIVER REGENERATION (HERV1 PROTEIN) - Homo sapiens (Human), 125 aa.	Human Gene Similar to SPTREMBL-ACC:088552 CLAUDIN-2 - MUS MUSCULUS (MOUSE), 230 aa.	Human Gene Similar to SPTREMBL- ACC:088552 CLAUDIN-2 - MUS MUSCULUS (MOUSE), 230 aa.	Human Gene Similar to SPTREMBL-ACC:Q14676 KIAA0170 PROTEIN -HOMO SAPIENS (HUMAN), 2089 aa.	Human Gene Similar to SPTREMBL-ACC:Q14676 KIAA0170 PROTEIN -HOMO SAPIENS (HUMAN), 2089 aa.	Human Gene Similar to SWISSNEW- ACC:043182 RHO-GTPASE- ACTIVATING PROTEIN 6 (RHO-TYPE GTPASE-ACTIVATING PROTEIN RHOGAPX-1) - Homo sapiens (Human), 587 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	SIFIED	UNCLAS	SIFIED
CONSERVATI	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE
Asp (1159)	Arg (1160)	lle (1161)	lle (1162)	Asn (1163)	Val (1164)
Asn	Lys	Val	Val	Asp	=
O	O	⊢	∢	∢	Ø
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444 GCTGTGCCGCC TTCACAATGAAG TGA/GJACCGGA AGCTGGGCAAG CCTGATTT	GCTGGCACCGA CATAAGAACTTG TT[T/C]TCCAGCT GGGGAGCAGCA TGGCAAC	472 TTCCAGCTGGG GAGCAGCATGG CAAIC/TJCAGTGT GCCCAAAAGCC CCAGAAGGC	268 GTCCTCTGTCAA GACCCCTGAAAC A[G/A]TTGTCCCC ACAGCCCCTGA GCTCCA	310 TGAGCTCCAGC CTTCCACCTCCA CA[G/A]ACCAGC CTGTCACCTCTG AGCCCAC	1139 TTCTGTCAATGT GGTCCGTGCCA TG[AG]TTGATAA CTGGGATGTCCT CTTCCA
444	447	472	268	310	1139
786 cg42696021	787 cg34243633	788 cg34243633	789 cg43942922	790 cg43942922	791 cg44938009
786	787	788	789	790	791

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	2 (4q28)		er.		
5.10E-62	1.6E-61	2.60E-61	2.60E-61	3.30E-54	1.3E-163
CONSERVATI UNCLAS Human Gene Similar to SWISSPROT-VE SIFIED ACC:Q04205 TENSIN - Gallus gallus (Chicken), 1744 aa.	Human Gene Similar to SWISSPROT-ACC:P07148 FATTY ACID-BINDING PROTEIN, LIVER (L-FABP) - Homo sapiens (Human), 127 aa.	CONSERVATI UNCLAS Human Gene Similar to SWISSPROT- VE SIFIED ACC:Q99653 CALCIUM-BINDING PROTEIN P22 (CALCIUM-BINDING PROTEIN CHP) - Homo sapiens (Human), 194 aa.	Human Gene Similar to SWISSPROT-ACC:Q99653 CALCIUM-BINDING PROTEIN P22 (CALCIUM-BINDING PROTEIN CHP) - Homo sapiens (Human), 194 aa.	Human Gene Similar to SWISSPROT-ACC:P91343 HYPOTHETICAL 49.0 KD TRP-ASP REPEATS CONTAINING PROTEIN F55F8.5 IN CHROMOSOME I - Caenorhabditis elegans, 439 aa.	Human Gene SWISSPROT- ID:O14520 AQUAPORIN-7 LIKE (AQUAPORIN ADIPOSE) (AQPAP) - HOMO SAPIENS (HUMAN), 342 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	water_ch annel
CONSERVATI	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE	CONSERVATI VE
Gly (1165)	Ala (1166)	Val (1167)	Asp (1168)	Asp (1169)	lle (1170)
	\ \ 	Leu	חַפּ	Asn	Val
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631 AGCCCTCAGGC GCGCCACAGAA CAGIT/GJGGGCA CCAACACTCCCC CTAGTCCT	279 GATTATGTCGCC GTTGAGTTCGGT C[A/G]CAGACTT GATGTTTTTGAA AGTTGT	497 AAGGCATTGATG ATCCGGTCCCC CA[G/C]TGGGTT GATGGCAAGTTC TGGAATC	534 CAAGTTCTGGAA TCCTCTGGAAAT C[T/G]TCCCGGC TGAGAGTCCCAT TCTCTC	1330 TCCACAACTTCT TCTGATGAGATG T[I/C]CTCCATTT CCATGTGTTTGT CCAAG	143 GATCTGTTGGCA GGGCTCACAGA GA[C/T]GGGGGT GAGGGGAGAGA TCGTGGGT
631	279	497	534	1330	143
792 cg39516123	793 cg44921974	794 cg42731307	795 cg42731307	796 cg44015614	797 cg43298242
792	793	794	795	796	797

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		14 (14q11.2)	1 (1p34)	4 (4927)	10 (10q24.1)
1.40E-109	6.00E-115	1.7E-136	1.3E-73	4.1E-231	3.2E-254
ATPase_ Human Gene Homologous to associate SWISSPROT-ID:P39986 PROBABLE d CALCIUM-TRANSPORTING ATPASE 6 (EC 3.6.1.38) - SACCHAROMYCES CEREVISIAE (BAKER'S YEAST), 1215 aa.	cadherin Human Gene Homologous to SWISSPROT-ID:P79995 CADHERIN- 10 PRECURSOR - GALLUS GALLUS (CHICKEN), 789 aa. pcls:SPTREMBL- ID:P79995 CADHERIN-10 - GALLUS GALLUS (CHICKEN), 789 aa.	Human Gene Homologous to SWISSPROT-ID:P08311 CATHEPSIN G PRECURSOR (EC 3.4.21.20) - HOMO SAPIENS (HUMAN), 255 aa.	Human Gene Similar to SWISSPROT-ID:Q07092 COLLAGEN ALPHA 1(XVI) CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 1603 aa.	Human Gene SWISSPROT- ID:P20248 G2/MITOTIC-SPECIFIC CYCLIN A - HOMO SAPIENS (HUMAN), 432 aa.	Human Gene SWISSNEW-ID:P33259 CYTOCHROME P450 2C17 (EC 1.14.14.1) (CYPIIC17) (P450-254C) - HOMO SAPIENS (HUMAN), 468 aa.jpcis:SWISSPROT-ID:P33259 CYTOCHROME P450 IIC17 (EC 1.14.14.1) (P450-254C) - HOMO SAPIENS (HUMAN), 468 aa.
ATPase_ associate d	cadherin	cathepsi n	collagen	cyclin	cyto450
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Tyr (1171)	(1172)	Asp (1173)	Gly (1174)	Pro (1175)	His (1176)
S <u>F</u>	Arg	Ala	S _V	nen	Asn
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O	-	₀	 	 	⋖
842 CTCCCAGTGCC CGCCCGACTAC CAC[C/T]ACATCC ACACCGAGATCT CCCGGGA	564 TTTCCTGAATGA ATGTTAAAGATT C[T/A]GTCAAGGT CAGTATGGCGAT CCAAG	259 GCAATGAGCTG CTGGCAGCACA AAG[G/T]CTTATC GCACCAGGAAA GATGCAGC	2521 TGGTCCGGGAA TACCTGGTGGAC CC[T/G]GCGGGC CCGGCTGCCAG GAGCTGCC	AATTCAAAGTAT CATGGTGTTTCT C[T/C]CCTCAACC CACCAGAGACA CTAAAT	1763 AGAGATTGAACG TGTGGTTGGCAG A[A/C]ACCGGAG CCCTGCATGCA GGACAG
842	564	259	2521	1467	1763
798 cg43299610	799 cg42532480	800 cg42926989	801 cg43991318	802 cg43920512	803 cg43063374
798	799	800	801	802	803

	22	21	
5.5E-69	2.4E-52	0	0
cytochro Human Gene Similar to SWISSPROT- me ID:P98001 CYTOCHROME C OXIDASE POLYPEPTIDE I (EC 1.9.3.1) - SACCHAROMYCES DOUGLASII (YEAST), 534 aa.	Human Gene Similar to SPTREMBL- ID:000761 CYTOCHROME OXIDASE SUBUNIT VIA HEART ISOFORM PRECURSOR (EC 1.9.3.1) (CYTOCHROME-C OXIDASE) (CYTOCHROME A(3)) (CYTOCHROME AA(3)) - HOMO SAPIENS (HUMAN), 97 aa.	deamina Human Gene SPTREMBL-ID:000465 se DSRNA ADENOSINE DEAMINASE DRADA2C - HOMO SAPIENS (HUMAN), 714 aa.	dehydrog Human Gene SWISSPROT- enase ID:Q16134 ELECTRON TRANSFER FLAVOPROTEIN-UBIQUINONE OXIDOREDUCTASE PRECURSOR (EC 1.5.5.1) (ETF-QO) (ETF- UBIQUINONE OXIDOREDUCTASE) (ETF DEHYDROGENASE) (ELECTRON-TRANSFERRING- FLAVOPROTEIN DEHYDROGENASE) - HOMO SAPIENS (HUMAN), 617 aa.
cytochro me	cytochro me	deamina se	dehydrog enase
NON-CONSERVATI me	NON- CONSERVATI VE	NON- de CONSERVATI se VE	NON- CONSERVATI VE
Leu (1177)	Thr (1178)	Pro (1179)	(1180)
Ser	Ala	- Se	14.
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O	O	⋖	∢
360 GGGTGAACTGT CTATCCACCATT ATC/TJATCTATT CAGGCACATTCA GGACCT	217 AGATAGGAGTTG C AAGGTGCAGAG GG[C/T]CACGCT GGGCAGCGCCA GCACGAAG	105 TGGTACTCCTTT GCCGCCAGCTT GG[A/G]CTCATG GTACACGTTGG	1402 TAGTGAAAATCT CCAATCAAAGAC A[A/G]CAGGACT CCATGTAACTGA ATATGA
360	217	1105	1402
804 cg21416244	805 cg44017721	806 cg43275625	807 cg43312829
804	802	806	807

41	=
0	1.8E-109
•	1.86
dehydrog Human Gene SWISSNEW-ID:P11586 enase C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC (C1-THF SYNTHASE) (METHYLENETETRAHYDROFOLATE DEHYDROGENASE (EC 1.5.1.5) / METHENYLTETRAHYDROFOLATE CYCLOHYDROLASE (EC 3.5.4.9) / FORMYLTETRAHYDROFOLATE SYNTHETASE (EC 6.3.4.3)) - HOMO SAPIENS (HUMAN), 934 aa.jocls:SWISSPROT-ID:P11586 C-1- TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC (METHYLENETETRAHYDROFOLATE DEHYDROGENASE (EC 1.5.1.5) / METHENYLTETRAHYDROFOLATE CYCLOHYDROLASE (EC 3.5.4.9) / FORMYLTETRAHYDROFOLATE SYNTHETASE (EC 6.3.4.3)) (C1-THF SYNTHASE) - HOMO SAPIENS (HUMAN), 934 aa.	dehydrog Human Gene Homologous to SPTREMBL-ID:Q16797 NADP- DEPENDENT MALIC ENZYME (EC 1.1.1.40) (MALATE DEHYDROGENASE (OXALOACETATE DECARBOXYLATING) (NADP+)) (PYRUVIC-MALIC CARBOXYLASE) - HOMO SAPIENS (HUMAN), 572 aa.
enase enase	dehydrog enase
SERVATI	NON- CONSERVATI VE
(1181)	Thr (1182)
Arg	e ■
H-	5
O .	4
GCTTGAGTGCG ATC C/T]GGTCTG CAATGATGGAG GAATTGCC	648 TGTCAGGAGGA / AGATCTCATCTG GG[A/G]TGTGCC GGATCCCGCCG GCGATGAC
1144	648
808 cg43959136	809 cg43969759
808	608

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2.10E-76	0.00E+00	2.20E-90	3.20E-57	3.20E-57	3.20E-57
dehydrog Human Gene Similar to SWISSPROT- enase ID:P46703 ACYL-COA DEHYDROGENASE (EC 1.3.99) - MYCOBACTERIUM LEPRAE, 389 aa.	Human Gene SPTREMBL-ID:Q92804 PUTATIVE RNA BINDING PROTEIN RBP56 - HOMO SAPIENS (HUMAN), 592 aa.	Human Gene Similar to SWISSPROT- ID:P26599 POLYPYRIMIDINE TRACT- BINDING PROTEIN (PTB) (HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN I) (HNRNP I) (57 KD RNA-BINDING PROTEIN PPTB-1) - HOMO SAPIENS (HUMAN), 531 aa.	Human Gene Similar to SPTREMBL-ID:008872 PUTATIVE RNA BINDING PROTEIN 1 - RATTUS NORVEGICUS (RAT), 362 aa (fragment).	Human Gene Similar to SPTREMBL-ID:008872 PUTATIVE RNA BINDING PROTEIN 1 - RATTUS NORVEGICUS (RAT), 362 aa (fragment).	Human Gene Similar to SPTREMBL-ID:008872 PUTATIVE RNA BINDING PROTEIN 1 - RATTUS NORVEGICUS (RAT), 362 aa (fragment).
	dna_rna_ bind	_ma_	dna_rna_ bind	dna_rna_ bind	dna_rna_ bind
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI bind VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
His (1183)	Phe (1184)	Cys (1185)	Pro (1186)	Cys (1187)	Val (1188)
Tyr	Val	Gly	Ala	Ser	Met
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697 GGGAGCTTTAGA CATTGCCACGGA T[T/C]ACGTCCAG AAGCGCAAGCA GTTTGG	1152 TGGAGACCCCA (AAAGTGGGGATT GG[G/T]TTTGCC CTAATCCGTCAT GCGGAAA	1352 GCAGAAGAGGT (GATTGTGAGAG GAC[C/A]AAGAG CTCCAGGAACA GCTGGAACT	108 GGAAACATTAA TAAACAAGTAGA A[G/C]CCTACAG AGAGGAATCGC AAAAATC	133 GCCTACAGAGA GGAATCGCAAAA ATIC/GICCTGAAA GAATTCCAGGAA AACACA	57 GATGCTGGAGG // ACTTCAAGAAAG AC[A/G]TGAAGA ACTCCCTTAGAG AAACACA
	1152	1352	108	133	57
810 cg39523614	811 cg42175288	812 cg43154217	813 cg39709402	814 cg39709402	815 cg39709402
810	811	812	813	814	815

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			16		
3.20E-57	3.20E-57	3.20E-57	0.00E+00	2.40E-123	1.40E-55
dna_rna_ Human Gene Similar to SPTREMBL-bind ID:008872 PUTATIVE RNA BINDING PROTEIN 1 - RATTUS NORVEGICUS (RAT), 362 aa (fragment).	Human Gene Similar to SPTREMBL-ID:008872 PUTATIVE RNA BINDING PROTEIN 1 - RATTUS NORVEGICUS (RAT), 362 aa (fragment).	Human Gene Similar to SPTREMBL-ID:008872 PUTATIVE RNA BINDING PROTEIN 1 - RATTUS NORVEGICUS (RAT), 362 aa (fragment).	Human Gene TREMBLNEW- ID:G2865466 HEAT SHOCK PROTEIN 75 - HOMO SAPIENS (HUMAN), 649 aa.	Human Gene Homologous to SWISSPROT-ID:P25685 DNAJ PROTEIN HOMOLOG 1 (HDJ-1) (HEAT SHOCK PROTEIN 40) (HSP40) - HOMO SAPIENS (HUMAN), 340 aa.	Human Gene Similar to TREMBLNEW-ID:G2735762 HEAT SHOCK PROTEIN DNAJ - LEPTOSPIRA INTERROGANS, 369 aa.
dna_rna_ bind	_ma_	dna_rna_ bind	u de	ydə	ude
NON- dna_ CONSERVATI bind VE	NON- dna_CONSERVATI bind	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Gly (1189)	Ser (1190)	Glu (1191)	End (1192)	Pro (1193)	Cys (1194)
Glu	Asn	Lys	Gin	Ser	Туг
<u>o</u>	ن ق	<u>o</u>	⋖	0	O
4	∢	⋖	ග	<u> </u>	⊢
76 AAAGACATGAAG AACTCCCTTAGA G[A/G]AACACAG GAAAACATTAAT AAACAA	94 CTTAGAGAAGA A CAGGAAAACATT A[A/G]TAAACAAG TAGAAGCCTACA GAGAG	96 TAGAGAAACACACA GGAAAACATTAA T[A/G]AACAAGTA GAAGCCTACAGA GAGGA	1949 TTTGCTATGTCC TCCTTGACCTCC T[G/A]CTCGGTG GCGGTCACAAT GCCCTCC	540 AAGACGAATGG GTGGTGGTAGA GAT[T/C]CTGAAG AAATGGAAATAG ATGGTGA	2250 AAAGCCAGCGG AGCCGTAAGCAT CA[T/C]ACTGCTT CCTCTTCACCTC ATCACT
76	94	96	1949	540	2250
816 cg39709402	817 cg39709402	818 cg39709402	819 cg43950268	820 cg43985169	821 cg43997616
816	817	818	819	820	821

21	Z (2		9	
	7 (Xp21.2)			
3.30E-60	0.00E+00	1.50E-139	1.90E-114	3.30E-55
·	0.00	1.50		
Human Gene Similar to SWISSNEW-ID:Q23917 3',5'-CYCLIC-NUCLEOTIDE PHOSPHODIESTERASE REGA (EC 3.1.4.17) (PDEASE REGA) - DICTYOSTELIUM DISCOIDEUM (SLIME MOLD), 793 aa.jpcis:SWISSPROT-ID:Q23917 3',5'-CYCLIC-NUCLEOTIDE PHOSPHODIESTERASE REGA (EC 3.1.4.17) (PDEASE REGA) - DICTYOSTELIUM DISCOIDEUM (SLIME MOLD), 793 aa.	glycoprot Human Gene SWISSPROT- ein ID:P23276 KELL BLOOD GROUP GLYCOPROTEIN (EC 3.4.24) - HOMO SAPIENS (HUMAN), 732 aa.	glycoprot Human Gene Homologous to ein SWISSPROT-ID:P41217 OX-2 MEMBRANE GLYCOPROTEIN PRECURSOR - HOMO SAPIENS (HUMAN), 274 aa (fragment).	glycoprot Human Gene Homologous to ein SPTREMBL-ID:Q14245 ERYTHROID MEMBRANE PROTEIN 4.1 - HOMO SAPIENS (HUMAN), 641 aa.	ein ID:PO4196 HISTIDINE-RICH GLYCOPROTEIN PRECURSOR (HISTIDINE-PROLINE RICH GLYCOPROTEIN) (HPRG) - HOMO SAPIENS (HUMAN), 525 aa.
esterase	glycoprot ein	glycoprot ein	glycoprot ein	glycoprot ein
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
(1195)	Gly (1196)	Asp (1197)	Leu (1198)	Ser (1199)
Phe	Glu	Val	Pro	Leu
O	O	⋖	∢	ပ
	تے	1	g g	-
992 CACGACAACTAC AGAAACAACCCC T[T/C]CCACAACT TCCGGCACTGCT TCTGC	382 GAGGTCCAGGC TGGGCAGGACA GTC[T/C]CCCCAT GGTGCCGTAAC AGCCTCTT	217 TCTCATCTGTCT ACCTACAGCCTG G[T/A]TTGGGTCA TGGCAGCAGTG GTGCTG	1824 TACCATCTCTGT TTTTACCACTGG T[G/A]GCTCTGAA CAACAAATAATT TGTGG	598 AAAGAGGAGAAT GGTGACTTTGCC T[I/C]ATTCAGAG TGGAACGAGCT GAAAGG
992	382	217	1824	
822 cg43319420	823 cg44034764	824 cg43991224	825 cg44018623	826 cg38924741
855	. 823	824	825	826

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3.30E-54	0.00E+00	1.00E-52	0.00E+00
3.3	00.0	00:	00
glycoprot Human Gene Similar to SWISSPROT- ein ID:P13983 EXTENSIN PRECURSOR (CELL WALL HYDROXYPROLINE- RICH GLYCOPROTEIN) - NICOTIANA TABACUM (COMMON TOBACCO), 620 aa.	Human Gene TREMBLNEW- ID:G2801555 PUTATIVE ATP- DEPENDENT MITOCHONDRIAL RNA HELICASE - HOMO SAPIENS (HUMAN), 786 aa.	Human Gene Similar to SWISSPROT- ID:Q01477 UBIQUITIN CARBOXYL- TERMINAL HYDROLASE 3 (EC 3.1.2.15) (UBIQUITIN THIOLESTERASE 3) (UBIQUITIN- SPECIFIC PROCESSING PROTEASE 3) (DEUBIQUITINATING ENZYME 3) - SACCHAROMYCES CEREVISIAE (BAKER'S YEAST), 912 aa.	interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q16666 IFI16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).
glycoprot	helicase	hydrolas e	interferon
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Gln (1200)	Phe (1201)	Pro (1202)	(1203)
Arg	Ser	Ser	Arg
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o ·	ပ	∢	o
13082 TTCCTGTTCTTC ACATGGTGAGC CC[C/T]GCCCTG CTGTCTGCTTGC ATTCGGG	2306 GAACACAACAAA GAAAAAACAGAG T[C/T]TGGGACTC ATCCAAAAGGGA CGAGA	278 TTGGCCTCGACA A TCATTCCCTGAC G[A/G]GGACTTA AAGGGTAGCAAT TCGTAT	2309 TAGTTTGCCCAA ACCAGCATCACC T[C/G]GGAACTTT TCTTCCATCAAG TCAGC
13082	2306	278	2309
827 cg43322513	828 cg44913214	829 cg39529972	830 cg43925670
827	828	858	830

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interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q16666 IF116=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).	Interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q16666 IFI16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).	interferon Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa. pcls:SPTREMBL-ID:Q16666 IFI16=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).
interferon	interferon	interferon
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
(1204)	(1205)	(1206)
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oFE9	2458 CCTCTAATCCTT OF TTAGTAGAACAA TIG/TJTTCTTGTA TTTTTTTCCCATC TTTA	2467 CTTTTAGTAGAA T CAATGTTCTTGT A[T/G]TTTTTTCC CATCTTTACAGA CATAA
2369	2458	2467
831 cg43925670	832 cg43925670	833 cg43925670
831	835	833

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		10	·
5.60E-131	0.00E+00	0.00E+00	0.00E+00
isomeras Human Gene Homologous to SWISSPROT-ID:P70473 2- ARYLPROPIONYL-COA EPIMERASE (EC 5) - RATTUS NORVEGICUS (RAT), 361 aa.	Human Gene SWISSNEW-ID:P42338 PHOSPHATIDYLINOSITOL 3-KINASE CATALYTIC SUBUNIT, BETA ISOFORM (EC 2.7.1.137) (PI3- KINASE P110 SUBUNIT BETA) (PTDINS-3-KINASE P110) (PI3K)- HOMO SAPIENS (HUMAN), 1070 aa. Ipcis:SWISSPROT-ID:P42338 PHOSPHATIDYLINOSITOL 3-KINASE CATALYTIC SUBUNIT, BETA ISOFORM (EC 2.7.1.137) (PI3- KINASE P110 SUBUNIT BETA) (PTDINS-3-KINASE P110) (PI3K)- HOMO SAPIENS (HUMAN), 1070 aa.	Human Gene SPTREMBL-ID:Q60680 CONSERVED HELIX-LOOP-HELIX UBIQUITOUS KINASE - MUS MUSCULUS (MOUSE), 745 aa.	Human Gene SPTREMBL-ID:000114 HYPOTHETICAL HUMAN SERINE- THREONINE PROTEIN KINASE R31240_1 - HOMO SAPIENS (HUMAN), 1237 aa (fragment).
isomeras e	kinase	kinase	kinase
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
(1207)	(1208)	Pro (1209)	(1210)
Ser	Arg	Ser	Met
⋖	<u> </u>	O	<u> </u>
U	U	_	UD
845 TCCTCGAGGTG CTTCCCACAGAC TC[G/A]ATTTCTG AGTTTCCACAG	1812 GAAATGGATCTT ATTTGGACTTTG C[G/T]ACAAGACT GCCGAGAGATTT TCCCA	2094 GACATCAGCATG GCTGCCCCCGA CT[I/C]CAGCAG AACATGATCATT CTCTGAC	686 TCACGGACTTTG GACTGTCCAAAA TGATGGCCTCAT GAGCCTGACAA CGAACT
845	1812	2094	989
834 cg43331742	835 cg43253796	836 cg43257400	837 cg43974480
834	8335	836	837

41)	01	5	12	
1 (19				
3.80E-279 1 (1941)	-216	-187	-187	2.70E-76
3.80E	2.80E-216	3.00E-187	3.00E-187	2.70
Human Gene SWISSPROT- ID:P27987 1D-MYO-INOSITOL- TRISPHOSPHATE 3-KINASE B (EC 2.7 1.127) (INOSITOL 1,4,5- TRISPHOSPHATE 3-KINASE) (IP3K) (IP3 3-KINASE) - HOMO SAPIENS (HUMAN), 505 aa (fragment).	Human Gene SWISSNEW-ID:070172 PHOSPHATIDYLINOSITOL-4- PHOSPHATE 5-KINASE TYPE II ALPHA (EC 2.7.1.68) (PIP5KII- ALPHA) (1- PHOSPHATIDYLINOSITOL-4- PHOSPHATIDYLINOSITOL-4- PHOSPHATE KINASE) (PTDINS(4)P- 5-KINASE B ISOFORM) (DIPHOSPHOINOSITIDE KINASE) - MUS MUSCULUS (MOUSE), 405 aa.	Human Gene SPTREMBL-ID:Q12792 PROTEIN TYROSINE KINASE - HOMO SAPIENS (HUMAN), 350 aa.	Human Gene SPTREMBL-ID:Q12792 PROTEIN TYROSINE KINASE - HOMO SAPIENS (HUMAN), 350 aa.	Human Gene Similar to TREMBLNEW- ID:D1025880 ZIP-KINASE - HOMO SAPIENS (HUMAN), 454 aa.
kinase	kinase	kinase	kinase	kinase
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Arg (1211)	Arg (1212)	Glu (1213)	Ser (1214)	Asn (1215)
- E	٥	Lys	Phe	Ser
O	O	<u>ت</u>	O	⋖
	o	< .		_ග
4337 CAAACCGGCTTT CTCCATGGTGCC CT/CJGCCAAAC CCTGGAGTTCCC AGGCTG	TGCAAAAACTGT TAAACATGGCGC T[G/C]GCGCGGA GATCTCCACCGT GAACCC	385 GTATGCAGCAAC AAGAGGAGCAGGAGGAGGAGGAGGAGGAGGAGGGAG	395 ACAAGAGCAACT I CTGAAGAAGGAA T[T/C]TGGAGGT GGCCACATTAAA GATGAA	96 GAGTACACCATC (AAGTCGCACTCC A[G/A]CTTGCCG CCCAACAACAGC TACGCC
4337	1460	385	395	96
838 cg43922705	839 cg38438124	840 cg42703622	841 cg42703622	842 cg41501665
83	833	84(841	84,

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2.70E-51	9.30E-280	0.00E+00	0.00E+00	0.00E+00	1.80E-198
2.70	9.30	0.0	0.0	0.00	1.80
Human Gene Similar to SWISSPROT- ID:P46546 GLUTAMATE 5-KINASE (EC 2.7.2.11) (GAMMA-GLUTAMYL KINASE) (GK) - CORYNEBACTERIUM GLUTAMICUM, 369 aa.	Human Gene SWISSPROT- ID: P36896 SERINE/THREONINE- PROTEIN KINASE RECEPTOR R2 PRECURSOR (EC 2.7.1.37) (SKR2) (ACTIVIN RECEPTOR-LIKE KINASE 4) (ALK-4) (ACTR-IB) - HOMO SAPIENS (HUMAN), 505 aa.	Human Gene SWISSPROT- ID:Q12756 KINESIN-LIKE PROTEIN KIF1A (AXONAL TRANSPORTER OF SYNAPTIC VESICLES) - HOMO SAPIENS (HUMAN), 1690 aa.	Human Gene SWISSNEW-ID:043896 KINESIN-LIKE PROTEIN KIF1C - HOMO SAPIENS (HUMAN), 1103 aa.jpcis:TREMBLNEW-ID:G2738149 KINESIN-LIKE MOTOR PROTEIN KIF1C - HOMO SAPIENS (HUMAN), 1103 aa.	Human Gene SWISSPROT- ID:Q16787 LAMININ ALPHA-3 CHAIN PRECURSOR (EPILIGRIN 170 KD SUBUNIT) (E170) - HOMO SAPIENS (HUMAN), 1713 aa.	Human Gene SWISSPROT- ID:P07221 CALSEQUESTRIN, SKELETAL MUSCLE ISOFORM PRECURSOR (ASPARTACTIN) (LAMININ-BINDING PROTEIN) - ORYCTOLAGUS CUNICULUS (RABBIT), 395 aa.
kinase	kinasere ceptor	kinesin	kinesin	laminin	laminin
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Thr (1216)	Gly (1217)	Pro (1218)	(1219)	His (1220)	Val (1221)
Ala	Asp	Thr	on O	Туг	Met
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o · ·	<	4	<	—	<
457 GCTTTATGGGTA TCGACATCCAAT G[C/T]GTCGATG TCCTCCACAACC TCCTCCACAACC	179 TGCATGGTTTCC	CATCCACCCAGC CCAAGATGACC GG[A/C]CCTTTTA CCAATTTGAGGC TGCGTG	1710 GCCATGGAGAG GCTGCAGGAGA CAG[A/G]GAAGA TTATAGCTGAGC TGAACGAG	TTTGGATCCTGA AAATGTTGTATTT [I/C]ATGTTGGAG GTTACCCACCTG ATTT	1228 TGATGCGGATAG CGTATGGATGGA A[A/G]TGGACGA TGAGGAGGACC TGCCTTC
457	179	3917	1710	2806	1228
843 cg25143358	844 cg29023997	845 cg43975720	846 cg44013875	847 cg44009224	848 cg42930646
843	844	845	846	847	848

	=	17 (17q23.1)		
7.20E-173	0.00E+00	0.00E+00	1.60E-76	2.60E-50
Human Gene SPTREMBL-ID:P79457 MALE-SPECIFIC HISTOCOMPATIBILITY ANTIGEN H- YDB - MUS MUSCULUS (MOUSE), 1186 aa.	misc_cha Human Gene TREMBLNEW- nnel ID:G2465531 KIDNEY AND CARDIAC VOLTAGE DEPENDENT K+ CHANNEL - HOMO SAPIENS (HUMAN), 676 aa.	misc_cha Human Gene SPTREMBL-ID:Q15478 nnel SODIUM CHANNEL ALPHA SUBUNIT - HOMO SAPIENS (HUMAN), 1836 aa.	Human Gene Similar to SWISSPROT-ID:P54278 PMS1 PROTEIN HOMOLOG 2 (DNA MISMATCH REPAIR PROTEIN PMS2) - HOMO SAPIENS (HUMAN), 862 aa.	Human Gene Similar to SWISSNEW- ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE] - HOMO SAPIENS (HUMAN), 874 aa. [pcls:SWISSPROT-ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE) - HOMO SAPIENS (HUMAN), 874 aa.
MHC	misc_cha nnel	misc_cha nnel	nuclease	nuclease
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Leu (1222)	Phe (1223)	Tyr. (1224)	Lys (1225)	End (1226)
or	Ser	Asn	<u> </u>	Leu
<u> </u>	F	F	 -	 -
O	O	<	O	∀
3745 CCAGACAGCAC CACTGGAACCC CTCICTJTAGCAG CGCACCAGACC CGAAGAAC	1807 GAGCTGCAGAG GAGGCTGGACC AGT[C/T]CATTGG GAAGCCCTCACT GTTCATC	929 GAGTGACCCGC / CTCCCTGGTCCA AG[A/T]ATGTGGA GTACACCTTCAC AGGGAT	1396 AGTGCACACAGT GAGCTCAGAGC TT[C/T]CCCTGA AAACCGAAAGTT TCAACT	304 TTTCTGATAATC ATTTAAGGTATG TATTAAGGTATG GTATTTAATTTA
3745	1807	929	1396	304
849 cg43935885	850 cg42928872	cg44019843	852 cg44128805	853 cg38642684
849	850	851	852	8853

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	11 (11p13)		
06	96	0	09
2.60E-50	2.70E-296	0.00E+00	2.40E-50
o.	2.70	0.0	² 2
⇒ Q S Z	(6) at	26	i i i
ATE ATE NS: NS: HON 9);	11.1.0 27 aa	SINE NS	## ## ## ## ## ## ## ## ## ## ## ## ##
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IN SINGLE	PRO E (E	MBL VT V VP - U	DELI JELI JELI JELI JASEN, 372,
HIGH HIGH HIGH HIGH HIGH HIGH HIGH HIGH	IISSI LAS (HU	TRE THPT HOM HOM	NA- OID (SE/I) XXY-I DBO DBO VE RAT S-3-Y RAT
E Sin ROT ROT ROD UDOI UM/ SSP SSP SSP SSP TAS TAS	e SW ATA ENS	a SP PRC ASE IR - 1	BENY BENY BENY BENY BENY BENY BENY BENY
Human Gene Similar to SWISSNEW- ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE] - HOMO SAPIENS (HUMAN), 874 aa.jpcls:SWISSPROT-ID:P10266 RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE (EC 2.7.7.49); ENDONUCLEASE) - HOMO SAPIENS (HUMAN), 874 aa.	Human Gene SWISSPROT- ID:P04040 CATALASE (EC 1.11.1.6) HOMO SAPIENS (HUMAN), 527 aa.	Human Gene SPTREMBL-ID:00018 RECEPTOR PROTEIN TYROSINE PHOSPHATASE HPTP-J PRECURSOR - HOMO SAPIENS (HUMAN), 1436 aa.	Human Gene Similar to SWISSPROT- ID:P22072 3 BETA- HYDROXYSTEROID DEHYDROGENASE/DELTA 5>4- ISOMERASE TYPE II (3BETA-HSD II) (3-BETA-HYDROXY-DELTA(5)- STEROID DEHYDROGENASE (EC 1.1.1.145) (3-BETA-HYDROXY-5-ENE STEROID DEHYDROGENASE) (PROGESTERONE REDUCTASE) / STEROID DELTA-ISOMERASE (EC 5.3.3.1) (DELTA-5-3-KETOSTEROID ISOMERASE)) - RATTUS NORVEGICUS (RAT), 372 aa.
P 102 L P C V E B 7.7.49 P I E N P I E N P I E N I T R O I L Y P I I M A I	man 2040 MO	man CEP OSP IMAI	man P220 DRO DRO MET/ MET/ SCGI (COG
		phosphat Human Gene SPTREMBL-ID:000197 ase RECEPTOR PROTEIN TYROSINE PHOSPHATASE HPTP-J PRECURSOR - HOMO SAPIENS (HUMAN), 1436 aa.	
nuclease	peroxida se	spha	e e
unct	pero se	phos ase	e e
ATI	ATI	ATI	ITA
ERV.	ERV	ERV	ERV
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
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(1227)	Gln (1228)	Gly (1229)	(1230)
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AACTO	A A A A E	CTG AGG AAC ATA	CTA'S GGA
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	TGG CTT/ SAAT	GGT ATG CJCA CTG SGG	104 204 204 204 204 204 204 204 204 204 2
CTTTTCAGGTG CAATGATTAAAC C[A/T]CTTAACTG TGCATTCCTTAT GACAG	CCAGTTGGTAAA CTGGTCTTAAAC C[G/A]GAATCCA GTTAATTACTTT GCTGAG	CCTGCGGTCTG GGGAGATGAGG GCC[T/C]CAAAC AGCACCTGATAT TCATTGGG	AAAGCTCAGAGA GATCTGGGCTAT G[AT]GCCACTT GTCAGCTGGGA GGAAGCC
P A G A G A A A A A A A A A A A A A A A	8 9 8 9 8	5005 CCTGCGGTCTG GGGAGATGAGG GCC[T/C]CAAAC AGCACCTGATA TCATTGGG	214 AAAGCTCAGAGA A GATCTGGGCTAT G[A/T]GCCACTT GTCAGCTGGGA GGAAGCC
417	1194	5005	214
+		10	m .
2684	3847	4915	
3864	4491	4008	4272
854 cg38642684	855 cg44913844	856 cg40084915	857 cg42720088
8	 &	88	88
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20 (20p11.2	3 (3p)			10
0.00E+00	2.90E-260	7.80E-113	6.00E-55	0.00E+00
Human Gene SWISSPROT- ID:P07204 THROMBOMODULIN PRECURSOR (FETOMODULIN) (TM) (CD141 ANTIGEN) - HOMO SAPIENS (HUMAN), 575 aa.	Human Gene SPTREMBL-ID:Q92777 SYNAPSIN IIB - HOMO SAPIENS (HUMAN), 478 aa.	Human Gene Homologous to SWISSPROT-ID:Q92176 CORONIN- LIKE PROTEIN P57 - BOS TAURUS (BOVINE), 461 aa.	Human Gene Similar to SWISSPROT-ID:P07313 MYOSIN LIGHT CHAIN KINASE, SKELETAL MUSCLE (EC 2.7.1.117) (MLCK) - ORYCTOLAGUS CUNICULUS (RABBIT), 607 aa.	Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. pcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.
struct	struct	struct	struct	sulfotran sferase
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Leu (1231)	His (1232)	(1233)	Ser (1234)	(1235)
<u>n</u>	<u>명</u> .	Gly	Asn	Asn
-	O		<u>o</u>	O
< .	ل ا	O	<	 -
1528 CGCTCCTGCAC CGCATCCGCGA CGC[AT]GTCCT GCAACGACCTCT GCGAGCAC	1462 CTCAGAGACCC CTAACAACCCAG CA[G/C]CCACAG AGCGGAACACTT AAGGATC	CACCTCCTCCAG CTTCCCAGCCTC C[C/T]CGGCTCT GGCCAGGCTGC CGCTGGG	318 GCAGCCAAGAT CATCAAAGTGAA GA[A/G]CGTAAA GGACCGGGAGG ATGTGAAG	966 ATAGTAGCCAGG GACAAGACAGC GG[T/C]TCTGCA GGGAGCGTAGT GCCAGAGG
1528	1462	473	318	9 9 6
858 cg43957486	859 cg40148056	860 cg43981852	861 cg42522566	862 cg43297806
858	829	860	861	862

10	18 (1p34.1)	20 (20q11.2)		17
0			6	
0.00E+00	0.00E+00	5.30E-240	2.80E-72	0.00E+00
00	0:0			0.0
Human Gene SWISSPROT- ID:P52849 HEPARIN SULFATE N- DEACETYLASE/N- SULFOTRANSFERASE (EC 2.8.2) (N- HSST) (N-HEPARIN SULFATE SULFOTRANSFERASE) (GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE) - HOMO SAPIENS (HUMAN), 883 aa. [pcls:TREMBLNEW-ID:G2792518 HEPARAN GLUCOSAMINYL N- DEACETYLASE/N- SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 883 aa.	Human Gene SWISSPROT- ID:P17812 CTP SYNTHASE (EC 6.3.4.2) (UTPAMMONIA LIGASE) (CTP SYNTHETASE) - HOMO SAPIENS (HUMAN), 591 aa.	Human Gene SWISSPROT- ID:P48637 GLUTATHIONE SYNTHETASE (EC 6.3.2.3) (GLUTATHIONE SYNTHASE) (GSH SYNTHETASE) (GSH-S) - HOMO SAPIENS (HUMAN), 474 aa.	synthase Human Gene Similar to SWISSNEW-ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.	transcript Human Gene SWISSPROT- ID:Q02086 TRANSCRIPTION FACTOR SP2 (KIAA0048) - HOMO SAPIENS (HUMAN), 606 aa.
sferase	synthase	synthase	synthase	transcript factor
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Ala (1236)	Ser (1237)	Ser (1238)	Asn (1239)	(1240)
<u>1</u>	Arg	Pro	Thr	n Ö
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994 TGCAGGGAGCG TAGTGCCAGAG GGG[T/C]CTGGG AGGAGGCTGAA ATCACCTGA	AGTAGTCTGCGT CTCCATAGAGTT T[C/A]CTCATGAC TGAGTTCTTGGT CTGGA	633 GAAATGCACTGG ACCACTCGGGC AGGC/AJGCTGCC AGGCCGTAGCA GGCAATTC	605 ACGCACGAACC GGTCATACTGGT CG[G/T]TGATCC AGGAACGGTCG CACAGCTG	1261 GAAGCGCTTCTG ACACTGGGCGC AC[T/C]CGAAGC GTTTGTCCCCTG TGTGGGT
998	1337	633	605	1261
863 cg43297806	864 cg43987111	865 cg43976335	866 cg39515668	867 cg44027791
863	864	865	866	867

			
ଟ,			2 (2921)
1.50E-144	7.80E-54	5.7e-312	0.00E+00
transcript Human Gene Homologous to SWISSNEW-ID:Q14469 TRANSCRIPTION FACTOR HES-1 (HAIRY AND ENHANCER OF SPLIT 1) (HAIRY LIKE) (HHL) (HAIRY HOMOLOG) - HOMO SAPIENS (HUMAN), 280 aa.	transcript Human Gene Similar to SWISSNEW- factor ID:061751 RENAL TRANSCRIPTION FACTOR KID-1 (TRANSCRIPTION FACTOR 17) - MUS MUSCULUS (MOUSE), 572 aa. [pcls:SWISSPROT- ID:061751 RENAL TRANSCRIPTION FACTOR KID-1 (TRANSCRIPTION FACTOR 17) - MUS MUSCULUS (MOUSE), 572 aa.	transcript Human Gene SWISSNEW-ID:Q61079 SINGLE-MINDED HOMOLOG 2 (SIM TRANSCRIPTION FACTOR) (MSIM) - MUS MUSCULUS (MOUSE), 657 aa.lpcls:SWISSPROT-ID:Q61079 SINGLE-MINDED HOMOLOG 2 (SIM TRANSCRIPTION FACTOR) (MSIM) - MUS MUSCULUS (MOUSE), 657 aa.	Human Gene SWISSPROT- ID:Q09328 ALPHA-1,3(6)- MANNOSYLGLYCOPROTEIN BETA- 1,6-N-ACETYL- GLUCOSAMINYLTRANSFERASE V GC 2.4.1.155) (ALPHA-MANNOSIDE BETA-1,6-N- ACETYLGLUCOSAMINYLTRANSFER ASE (N-ACETYLGLUCOSAMINYL- TRANSFERASE V) (GNT-V) (GLCNAC-T V) - HOMO SAPIENS (HUMAN), 741 aa.
transcript factor	factor factor	factor factor	transfera se
NON- CONSERVATI factor VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Thr (1241)	Arg (1242)	Asp (1243)	(1244)
Ala	Gin	His S	G
—	O	<u>5</u>	4
O	⊢	0	_တ
578 GAGGGGCCGCT GGAAGGTGACA CTG[C/T]GTTGG GGCCCACGGAG GTGCCGCTG	816 TAAGTGTCTGAT GAGGTGTGACTT C[T/C]GGCTAAA GCCTTGCTCACA CTCCCT	1594 CGAGAAGACCC TATACCATCACG TG[C/G]ACGGCT GCGACGTGTTC CACCTCCG	2828 AGAGCAATGGCT CTCTTCACTCCG T[G/A]GAAGTTGT CCTCTCAGAAGC TGGGC
578	816	1594	2828
868 cg43992817	869 cg43297259	870 cg42716761	871 cg42166807
868	698	870	871

F				
<u>6.</u>	15		1 (1p31)	1 (1p31)
0.00 <u>E</u> +00	0.00E+00	0.00E+00	2.90E-237	2.90E-237
transport Human Gene SWISSPROT- ID:P30825 HIGH-AFFINITY CATIONIC AMINO ACID TRANSPORTER-1 (CAT-1) (CAT1) (SYSTEM Y+ BASIC AMINO ACID TRANSPORTER) (ECOTROPIC RETROVIRAL LEUKEMIA RECEPTOR HOMOLOG) (ERR) (ECOTROPIC RETROVIRUS RECEPTOR HOMOLOG) - HOMO SAPIENS (HUMAN), 629 aa.	Human Gene SWISSPROT- ID:Q04671 P PROTEIN (MELANOCYTE-SPECIFIC TRANSPORTER PROTEIN) - HOMO SAPIENS (HUMAN), 838 aa.	transport Human Gene SWISSPROT- ID:Q15436 PROTEIN TRANSPORT PROTEIN SEC23 HOMOLOG ISOFORM A - HOMO SAPIENS (HUMAN), 765 aa.	Human Gene SWISSPROT- ID:P22732 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE (FRUCTOSE TRANSPORTER) - HOMO SAPIENS (HUMAN), 501 aa.	Human Gene SWISSPROT- ID:P22732 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE (FRUCTOSE TRANSPORTER) - HOMO SAPIENS (HUMAN), 501 aa.
transport	transport	transport	transport	transport
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Pro (1245)	Тгр (1246)	Pro (1247)	Arg (1248)	Gln (1249)
ren .	Arg	Ala	Cys	Ārg
O	-	O		⊢
<u>_</u>) O	5	V	O
752 TTCACTTGTATTA ACGTCCTGGTCC [T/C]GGGCTTCAT AATGGTGTCAGG ATTT	3392 CAGAGAGGG TGTCCATCAGCA TC[C/T]GGGCCT CCCTGCAGCAG	513 TGGTATATCTGA ACTGAATCAGCC T[G/C]CTGAACTT TTACCTCAGTTT TCTAG	2024 GTAAGTCTCATT GTAAAATTGTTG C[A/G]TGAGCAG TGCTGGGGAGTT GACAGC	2185 TGCTTGCTCTGG AAGGGCAGAGT GC[C/T]GCTCAC CTCCTTTTAGCC AAAGTAA
752	3392	513	2024	2185
872 cg38869466	873 cg42742340	874 cg43976701	875 cg43920728	876 cg43920728
872	873	874	875	876

5	3)	12	12	4	
	10 (10p11.2 3)				
1.90E-105	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90	0.0	0.0	0.0	0.0	0.0
transport Human Gene Homologous to SWISSNEW-ID:Q60714 LONG- CHAIN FATTY ACID TRANSPORT PROTEIN (FATP) - MUS MUSCULUS (MOUSE), 646 aa. Ipcls:SWISSPROT- ID:Q60714 LONG-CHAIN FATTY ACID TRANSPORT PROTEIN (FATP) MUS MUSCULUS (MOUSE), 646 aa.	Human Gene SWISSPROT- ACC:Q05329 GLUTAMATE DECARBOXYLASE, 65 KD ISOFORM (EC 4.1.1.15) (GAD-65) (65 KD GLUTAMIC ACID DECARBOXYLASE) - Homo sapiens (Human), 585 aa.	Human Gene SPTREMBL- ACC:O75176 KIAA0692 PROTEIN - HOMO SAPIENS (HUMAN), 783 aa (fragment).	Human Gene TREMBLNEW- ACC:BAA31589 KIAA0614 PROTEIN - HOMO SAPIENS (HUMAN), 1630 aa (fragment).	Human Gene TREMBLNEW- ACC:BAA20772 KIAA0313 PROTEIN - HOMO SAPIENS (HUMAN), 1499 aa.	Human Gene SPTREMBL- ACC:000237 HKF-1 - HOMO SAPIENS (HUMAN), 685 aa.
transport	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Tyr (1250)	Asn (1251)	Glu (1252)	Tyr (1253)	Asn (1254)	Thr (1255)
Si	Ser	Gly	E.S.	ne.	Met
∢	⋖	-	F	⊢	ڻ ت
ن ق	g	lo	O	o	<
450 TCCTCCACCAGG GTCATTTTGCGG T[G/A]TTTAAAAG TTCCAGTGATCT CAATG	TGCACCTGCGA CCAAAAACCCTG CA[G/A]CTGCC CAAAGGGGATG TCAACTAC	GCTCCCGTGCA CGGGGCTGTAG CGC[C/T]CAGGA CTGCCCAGGCC TGGCTTTGC	1080 ACCTCCTGGAG CAGTCCTGGTGT TA[C/T]ATTCCCT GCCTGGAGT TCCCTGGAGT TCCCACT	45 4	AGTGCAG ATCAGCA ATCAGCA AGTTAAC
450	388	1806	1080	2459	089
877 cg42339179	878 cg17663981	cg43918356	880 cg43924089	cg43930961	882 cg43966528
877	878	879	880	881	882

17	50		0			
0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-299	8.10E-298	8.10E-298
Human Gene SWISSPROT- ACC:P38432 P80-COILIN - Homo sapiens (Human), 576 aa.	Human Gene SPTREMBL- ACC:O75882 ATTRACTIN - HOMO SAPIENS (HUMAN), 1198 aa.	Human Gene TREMBLNEW- ACC:AAD23581 CULLIN 2 - HOMO SAPIENS (HUMAN), 745 aa.	Human Gene SPTREMBL- ACC:Q92574 HAMARTIN (MYELOBLAST KIAA0243) - HOMO SAPIENS (HUMAN), 1164 aa.	Human Gene SPTREMBL- ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.	Human Gene TREMBLNEW- ACC:AAD21812 G9A - HOMO SAPIENS (HUMAN), 1001 aa.	Human Gene TREMBLNEW- ACC:AAD21812 G9A - HOMO SAPIENS (HUMAN), 1001 aa.
UNCLAS SIFIED .	UNCLAS	UNCLAS	UNCLAS SIFIED	SIFIED	SIFIED	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Leu (1256)	Pro (1257)	End (1258)	Thr (1259)	Pro (1260)	Glu (1261)	Glu (1262)
Pro	Leu	σ	Met	Ser	Gly	Lys
V	<u>o</u>		O	O	-	O
g	∢ .	O	⊢	 	O	 -
· () (5	1540 TGACTGCATTAT A TCGCAGCTGCTT A[A/G]GGACAAA TTCTACCTTCTT CTGGGT	1200 TAGATGAAGGAGC CCTGAGTAAGAG G[C/T]CACGCAC CAGCCTGTAGAA CATATA	2754 AACAGTGAGTCG GTCCAGCAGCA GA[T/C]GGAGTT CTTGAACAGGCA GCTGTTG	2082 ACCTCCAAACCC CTTTGGCCCTGT A[T/C]CAGGAGC ACAGATACAGTT TATGTA	1373 GTCGCACTTGG CAGCCAGCAGG ATC[C/T]CGGCTA TGTCCACGCAG CCGGAGAA	2870 TTTCCTTTCCTCT TGAGAAATTTCT[T/C]CTTAATGCT GGATTCCGAACT CAGG
1367	1540	1200	2754	2082	1373	2870
883 cg43980727	884 cg43981483	885 cg44932392	886 cg44932924	887 cg43985955	888 cg44002507	889 cg44002507
883	884	885	886	887	888	888

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	19					
8.10E-298	1.00E-290	2.00E-285	1.80E-274	1.80E-274	6.10E-268	2.30E-259
Human Gene TREMBLNEW- ACC:AAD21812 G9A - HOMO SAPIENS (HUMAN), 1001 aa.	Human Gene SPTREMBL- ACC:015184 CDC42-INTERACTING PROTEIN 4 - HOMO SAPIENS (HUMAN), 545 aa.	Human Gene SPTREMBL- ACC:Q15043 MRNA (KIAA0062) FOR ORF (NOVEL PROTEIN), PARTIAL CDS - HOMO SAPIENS (HUMAN), 531 aa (fragment).	Human Gene TREMBLNEW- ACC:AAD29670 DNA TOPOISOMERASE III BETA - HOMO SAPIENS (HUMAN), 862 aa.	Human Gene TREMBLNEW- ACC:AAD29670 DNA TOPOISOMERASE III BETA - HOMO SAPIENS (HUMAN), 862 aa.	Human Gene SPTREMBL- ACC:O75907 ACAT RELATED GENE PRODUCT 1 - HOMO SAPIENS (HUMAN), 488 aa.	Human Gene SPTREMBL- ACC:O75475 LENS EPITHELIUM- DERIVED GROWTH FACTOR - HOMO SAPIENS (HUMAN), 530 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Met (1263)	Pro (1264)	Thr (1265)	(1266)	Leu (1267)	His (1268)	Pro (1269)
Val	Gin Cin	Ala	Phe	Pro	ng	Th
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O	⋖	O	⋖	<u>ن</u>	O	⊢
507 CGCAGGTCCTG GTGGGCCATGA ACA[C/T]GCGCA CGGGCACCAGG TTGGGCTCG	1086 GAGCAGCAGCG AAAACGGCTTCA AC[A/C]GCAGTT GGAAGAACGCA GTCGTGAA	TCATTCATCTCA GGGAACATATCA GIC/TJCAGAGAA ATATACAAGAAC	2180 ACAAAGTAGTGG AACTTCCTCTTG A[A/G]CACGTCC AGGGTGTGGCC CAGGACC	2596 CCAGGGCATGA CCTCCGTGAAG CCT[G/A]GTGAG AGGACGGTCTTC CCGGAGCA	GGACGTACATGA GGACGGCTATT GG[C/A]TGTCCG ATGATGAGCGAC AGCCACA	2097 CCTTCATCTTTAT TCTGCTGCTCAG [I/G]TTCCATTTG TTCCTCTTGATT GCGT
207	1086	3315	2180	2596	378	2097
890 cg44002507	891 cg44128920	892 cg43968641	893 cg43934178	894 cg43934178	895 cg43949042	896 cg43916582
890	891	892	893	894	895	968

	16 (16p13.1)			က	12 (12q22)	12 (12q22)
2.70E-258	5.60E-258	2.40E-256	8.20E-245	3.50E-240	2.00E-237	2.00E-237
Human Gene SWISSNEW- ACC:Q14449 GROWTH FACTOR RECEPTOR-BOUND PROTEIN 14 (GRB14 ADAPTER PROTEIN) - Homo sapiens (Human), 540 aa	Human Gene SPTREMBL-ACC:Q13977 MAJOR YO PARANEOPLASTIC ANTIGEN -HOMO SAPIENS (HUMAN), 509 aa (fragment).	Human Gene SPTREMBL- ACC:O75926 PROTEIN INHIBITOR OF ACTIVATED STAT PROTEIN PIASY - HOMO SAPIENS (HUMAN), 510 aa.	Human Gene TREMBLNEW- ACC:CAB46424 DKFZP434G153 PROTEIN - HOMO SAPIENS (HUMAN), 466 aa.	Human Gene SPTREMBL- ACC:Q92551 MYELOBLAST KIAA0263 - HOMO SAPIENS (HUMAN), 441 aa.	Human Gene SWISSPROT- ACC:P42167 THYMOPOIETINS BETA AND GAMMA (TP BETA AND TP GAMMA) - Homo sapiens (Human), 453 aa.	Human Gene SWISSPROT- ACC:P42167 THYMOPOIETINS BETA AND GAMMA (TP BETA AND TP GAMMA) - Homo sapiens (Human), 453 aa.
UNCLAS	SIFIED	UNCLAS SIFIED	UNCLAS	SIFIED	UNCLAS	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Thr (1270)	(1271)	Pro (1272)	(1273)	Tyr (1274)	Ser (1275)	Lys (1276)
<u>=</u>	Gin	Leu	Met	His	Pro	Met
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485 AACTCCATCCAC AAGTCCTTGCTG A[AG]TAATCAAT CGCTGAGCCTC ATCTCT	619 GAGAAGGAGCC CGGGAAAGTGT GAC[C/T]AGGAG AAACCGGCACC CAGCTTTGC	TACCCCAATGGT CTTCAGCCTCTG C[A/G]GCAGCTC CGATGAGGTCA GCTGCCG	994 CCAGGCCTCGA ATGGACAGCAC CTT[C/A]ATGATG GGGTCGTGGTG GCTCAGGC	3689 TGACAACGCAG GCTCCAGGGGT TGT[G/A]GCTGAT CTTCTCAGAACT CAAGCCA	1546 GAGAATTCAGTG ATTGGCAGAATA G[G/A]AGATGCA TGCTTGAAATTT CCAGTC	1608 AACTAAGGATTC GTTGCTTGAAGC C[A/I]TTATAGTT TCAGCTATGGGA GTACT
48	61	887	66	368	154	160
897 cg43258841	898 cg43979679	899 cg42202923	900 cg43320405	901 cg43917689	902 cg43922856	903 cg43922856
897	868	668	006	901	905	903

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	_				(1p36.2)	
2.80E-215	5.30E-214	1.30E-212	2.00E-207	8.80E-205	1.00E-201	5.60E-194
Human Gene SPTREMBL- ACC:O15417 CAGL79 - HOMO SAPIENS (HUMAN), 413 aa (fragment).	Human Gene TREMBLNEW- ACC:AAD44491 PTD004 - HOMO SAPIENS (HUMAN), 396 aa.	Human Gene SPTREMBL- ACC:Q15018 ORF - HOMO SAPIENS (HUMAN), 419 aa (fragment).	Human Gene TREMBLNEW. ACC:AAD34036 CGI-40 PROTEIN - HOMO SAPIENS (HUMAN), 845 aa.	Human Gene SPTREMBL- ACC:Q16543 CDC37 HOMOLOG - HOMO SAPIENS (HUMAN), 378 aa.	Human Gene SWISSPROT- ACC:P18615 RD PROTEIN - Homo sapiens (Human), 380 aa.	Human Gene SPTREMBL- ACC:O88466 ZINC FINGER PROTEIN 106 - MUS MUSCULUS (MOUSE), 1888 aa.
UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS	SIFIED	UNCLAS	UNCLAS SIFIED	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Ser (1277)	Cys (1278)	Phe (1279)	Ser (1280)	Ser (1281)	Gly (1282)	Val (1283)
Pro	۲	Ser	Ala	Gly	Arg	Met
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505 CGTGTGGCAGG CATGGTGATGAG GG[G/A]TGCTGG GGCCAGGGAGG TGGCAGGGA	991 AGGAATGACCAA AGCACCTGGGT CA[T/C]ACTTGTC CACCCACTCTTT AATTT	2102 ACTTCTGCCTTC AGCTGCAAACCC A[G/A]AGGACGG CATCCGAGGACT GAACGC	1136 CGTCTTCTCCAT CATTCACATCAT C[G/T]CCACCCT GCTCCTCAGCAC GCAGCT	/B .	675 CCGGGATCGAG ACAGAGACAGA GAGIC/GJGGGAC AGGGATCGGGA TCGGGATCG	1413 GGGTGTGGACT GGCTGCAGATG TCA[T/C]TTGTAA TTCAGATTCTTT CTGGCGA
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904 cg43955639	905 cg43950766	906 cg43985159	907 cg41022625	908 cg44002669	909 cg44128902	910 cg44129213
904	905	906	907	806	606	910

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2.60E-189	1.70E-187	7.70E-158	1.90E-154	5.00E-154	1.90E-138	2.20E-137
5.60	1.70	7.70	1.90	5.00	1.90	2.20
Human Gene SPTREMBL- ACC:Q12804 RECEPIN - HOMO SAPIENS (HUMAN), 451 aa.	Human Gene SPTREMBL- ACC:Q99963 PROTEIN CONTAINING SH3 DOMAIN, SH3GL3 - HOMO SAPIENS (HUMAN), 347 aa.	Human Gene SWISSPROT- ACC:P55040 GTP-BINDING PROTEIN GEM (GTP-BINDING MITOGEN-INDUCED T-CELL PROTEIN) (RAS-LIKE PROTEIN KIR) Homo sapiens (Human), 296 aa.	Human Gene SPTREMBL- ACC:O75323 GBAS - HOMO SAPIENS (HUMAN), 286 aa.	Human Gene TREMBLNEW- ACC:AAD34078 CGI-83 PROTEIN - HOMO SAPIENS (HUMAN), 288 aa.	Human Gene Homologous to SPTREMBL-ACC:093263 AVENA - GALLUS GALLUS (CHICKEN), 550 aa.	Human Gene Homologous to SPTREMBL-ACC:014777 RETINOBLASTOMA-ASSOCIATED PROTEIN HEC - HOMO SAPIENS (HUMAN), 642 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	SIFIED	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Cys (1284)	Leu (1285)	Phe (1286)	Ser (1287)	Pro (1288)	Pro (1289)	End (1290)
Giy	Pro	Val	Gly	Leu	Fen	n B
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684 CTTCTCCGGCTC CTTTCCTCCTG C[C/A]GTGGCTT CTGCTGCTCCCC	1268 CGAATATCAGCT GCATCCAGTGTC C[C/T]CAGACGA GAATACAAGCCA AGGCCT	GACAGAGGACA TTCCCATAATTTT G[G/T]TTGGCAA CAAAAGTGACTT AGTGCG	1351 AAGAATCCTCCG ACGGCTTCGTTA C[C/T]ATCCTGTC TGAAGCGGATTG CACGA	TTTTAAAGAGTT CATATAATCATA G[A/G]GGTCTTC AAATACCGTTGT TCCTTC	774 ACATTGCCTAGA CAAAACTCACAA C[T/C]ACCTGCTC AAGTTCAAAATG GCCCA	AGCTGAACAACA GAAGTTGTGGAA T[G/T]AGGAGTTA AAATATGCCAGA GGCAA
684	1268	778	1351	945	774	117
911 cg43996402	912 cg43984909	913 cg42910688	914 cg43950590	915 cg44931503	916 cg43303845	917 cg43973762
911	912	913	914	915	916	917

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2.20E-137	2.20E-137	3.10E-132	3.20E-127	3.20E-127
UNCLAS Human Gene Homologous to SIFIED SPTREMBL-ACC:O14777 RETINOBLASTOMA-ASSOCIATED PROTEIN HEC - HOMO SAPIENS (HUMAN), 642 aa.	Human Gene Homologous to SPTREMBL-ACC:O14777 RETINOBLASTOMA-ASSOCIATED PROTEIN HEC - HOMO SAPIENS (HUMAN), 642 aa.	Human Gene Homologous to SPTREMBL-ACC:014988 GTPASE- ACTIVATING PROTEIN - HOMO SAPIENS (HUMAN), 308 aa (fragment).	Human Gene Homologous to SPTREMBL-ACC:Q03626 ALPHA-1- INHIBITOR III PRECURSOR, ISOFORM 2 (RAT PLASMA PROTEINASE INHIBITOR ALPHA-1- INHIBITOR III GROUP 3 VARIANT 36A) (ALPHA-1 PROTEINASE INHIBITOR 3, EXONS 1-4) - RATTUS NORVEGICUS (RAT), 1487 aa.	Human Gene Homologous to SPTREMBL-ACC:Q03626 ALPHA-1- INHIBITOR III PRECURSOR, ISOFORM 2 (RAT PLASMA PROTEINASE INHIBITOR ALPHA-1- INHIBITOR III GROUP 3 VARIANT 36A) (ALPHA-1 PROTEINASE INHIBITOR 3, EXONS 1-4) - RATTUS NORVEGICUS (RAT), 1487 aa.
UNCLAS	UNCLAS	UNCLAS	SIFIED	SIFIED
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Pro (1291)	Gly (1292)	Arg (1293)	(1294)	Tyr (1295)
Ala	njg	Pro	Asn	Asp
O	ر ا	O	<u>.</u>	⊢
o o	<	Ø	O	g
165 CAAAGAAGCGAT (TGAAACACAATT A[G/C]CAGAGTA TCACAAATTGGC TAGAAA	GCCCTAAATAAA AAAATGGGTTTG G[A/G]GGATACT TTAGAACAATTG AATGCA	443 CCATGGTGCCA (GGCCGTGCTCC CCA[G/C]GTGCCT TCCGGGGTGCT GAAGATCTT	537 TTTCCCAAAAGT (CCAAGAAGT (CCAAGTAGACA A[C/G]AGTAATCGCCTGTTACTGCAGGACAGGACAGGACAGGA	574 GTTACTGCAGCA (GGTCTCATTACC A[G/T]ACATTCCT GGGAACTATACC GTCAG
165	376	443	537	574
918 cg43973762	919 cg43973762	920 cg42910848	921 cg29351416	922 cg29351416
918	919	920	921	922

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1.50E-123	3.10E-122	3.10E-122	2.20E-121	1.70E-120
Human Gene Homologous to TREMBLNEW-ACC:AAD40376 PTD013 - HOMO SAPIENS (HUMAN), 243 aa.	Human Gene Homologous to SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.	Human Gene Homologous to SWISSNEW-ACC:Q29459 PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE IB BETA SUBUNIT (EC 3.1.1.47) (PAF ACETYLHYDROLASE 30 KD SUBUNIT) (PAF-AH 30 KD SUBUNIT) (PAF-AH BETA SUBUNIT) - Homo sapiens (Human), and Bos taurus (Bovine), 229 aa.	Human Gene Homologous to TREMBLNEW-ACC:BAA83010 KIAA1058 PROTEIN - HOMO SAPIENS (HUMAN), 1534 aa (fragment).	Human Gene Homologous to SWISSPROT-ACC:035682 MYELOID UPREGULATED PROTEIN - Mus musculus (Mouse), 296 aa.
UNCLAS	SIFIED	SIFIED	UNCLAS	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Glu (1296)	Thr (1297)	(1298)	(1299)	Thr (1300)
Gly	- Ala	મ 나	Ser	Ala
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	ග	O	O	G
481 TIGITICCCACT C TAATTTATTTTT[C/I]CTGCTTGTT CTTCTTCTTCAT CCT	658 CCTCAAGGTTTC G GCTGCCGAAGC TT[G/A]CCAACGT GCAGCTCCTGG ATACCGA	680 CTTGCCAACGTG C CAGCTCCTGGAT A[C/T]CGACGGG GGTTTTGTGCAC TCGGAC	919 CTGGAGTACCA GGAAGAACTGA GGT[C/T]CCACTA CAAGGACATGCT CAGGGAA	571 TTGGCGCAACTT C CCCCATCACCTT C[G/A]CCTGCTAT GCGGCCCTCTT CTGCCT
481	658	089	919	571
923 cg43938372	924 cg44930828	925 cg44930828	926 cg44035718	927 cg44921277
923	924	925	926	927

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3.30E-102	1.20E-98	1.20E-98	1.20E-98	1.20E-98	2.60E-93	2.10E-90
Human Gene Homologous to TREMBLNEW-ACC:CAB43382 HYPOTHETICAL 146.2 KD PROTEIN - HOMO SAPIENS (HUMAN), 1296 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICAL PROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICAL PROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICAL PROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SWISSPROT-ACC:P03740 HYPOTHETICAL PROTEIN ORF194 - Bacteriophage lambda, 194 aa.	Human Gene Similar to SPTREMBL-ACC:O14997 3-7 GENE PRODUCT -HOMO SAPIENS (HUMAN), 709 aa (fragment).	Human Gene Similar to SPTREMBL-ACC:Q15382 RAS-RELATED GTP-BINDING PROTEIN - HOMOSAPIENS (HUMAN), 184 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	SIFIED
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Lys (1301)	lle (1302)	Glu (1303)	Val (1304)	Ser (1305)	Gly (1306)	End (1307)
Glu	Thr	Gly	Phe	Ala	n D	-B
<u> </u>	∢	F	O	⋖	G	F
O	ි ග	O	⋖	O	⋖	O
461 GCCGTGATTTGC TCCAGTGCCATC T[C/T]GTGCAGAT GCTCATCTCGGC TCTCG	344 CTTTTCCAGGC TTCCAGCAACGA G[G/A]TTTCTTCC TTCGTTGCAATT TCGTTGCAATT	GCCGTTCCACTT CTGATATTCCCC T[C/T]CCGGCGA TAACCAGGTAAA ATTTC	TCCCCTCCCGG CGATAACCAGGT AA[A/C]ATTTTCC GGTAACGGACC GAGTTCA	638 TGGTCTTCAACG AGATGCCACGAT G[C/A]CTCATCAC TGTTGAAAACAG CCACA	GCCTCCAGGAA GTCGTTTGTGTT TG[A/G]GCTGAA CGAATGTGCGTC CAGCCGC	510 AGTAAATGGACA AGAATATCATCT T[C/T]AACTTGTA GACACAGCCGG GCAAGA
461	344	517	536	638	851	510
928 cg43250166	929 cg39512856	930 cg39512856	931 cg39512856	932 cg39512856	933 cg39570960	934 cg43980391
928	929	930	931	932	933	934

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6.50E-90	8.10E-90	4.50E-89	4.50E-89	4.50E-89	2.00E-88	7.30E-84
Human Gene Similar to SWISSPROT-ACC:P47226 TESTIN 2 (TES2) [CONTAINS: TESTIN 1 (TES1)] - Musmusculus (Mouse), 423 aa.	Human Gene Similar to SPTREMBL-ACC:O60309 KIAA0563 PROTEIN -HOMO SAPIENS (HUMAN), 870 aa.	Human Gene Similar to SPTREMBL-ACC:000581 HYPOTHETICAL 20.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 176 aa.	Human Gene Similar to SPTREMBL-ACC:000581 HYPOTHETICAL 20.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 176 aa.	Human Gene Similar to SPTREMBL-ACC:000581 HYPOTHETICAL 20.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 176 aa.	Human Gene Similar to SPTREMBL-ACC:Q61081 CDC37 HOMOLOG -MUS MUSCULUS (MOUSE), 379 aa.	Human Gene Similar to SPTREMBL-ACC:P87891 GAG PROTEIN -HUMAN ENDOGENOUS RETROVIRUS K, 426 aa (fragment).
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Phe (1308)	(1309)	Gin (1310)	End (1311)	Ala (1312)	Ser (1313)	Met (1314)
Cys	<u>Б</u>	홄	G L	n D	Ala	Val
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g	O	.	iO	⋖	ا ق	O
991 TTCTGGAAGGAT GGTGCACCCTG GT[G/T]CGGCCG CCATTACTGCGA GAGTCTG	114 GATGAATATTCG AGTACAGACACA C[C/T]GTATCCC GGCAGCCTACC TCCAGAA	737 CTTCTATTTTGAA TTCTAAAGACCA(T/GJTTACAAGTA GAAAATGATGCT TACC	TATTTGAATTCT AAAGACCATTTA[C/TJAAGTAGAAA ATGATGCTTACC CTGG	781 GCTTACCCTGGT ACCGATAGAACA G[A/C]AAATGTTA AATATAGACAAG TGGAC	146 GCAGTTTTCAC CAAGATCAAGAC CIG/TJCTGACCA CCAGTACATGGA GGGCTT	641 TCTATGGCATCA TCCTGCATGACC A[C/T]TTGTGCAT CTAAACCAGCCC AGCCG
991	114	737	741	781	146	641
935 cg43983527	936 cg42341305	937 cg43980889	938 c943980889	939 cg43980889	940 cg29349483	941 cg43918287
935	936	937	938	636	940	941

				3		19
7.30E-84	7.30E-84	7.30E-84	1.20E-83	1.90E-83	1.90E-83	3.10E-83
UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:P87891 GAG PROTEIN -HUMAN ENDOGENOUS RETROVIRUS K, 426 aa (fragment).	Human Gene Similar to SPTREMBL-ACC:P87891 GAG PROTEIN -HUMAN ENDOGENOUS RETROVIRUS K, 426 aa (fragment).	Human Gene Similar to SPTREMBL-ACC:P87891 GAG PROTEIN -HUMAN ENDOGENOUS RETROVIRUS K, 426 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:BAA76824 KIAA0980 PROTEIN -HOMO SAPIENS (HUMAN), 1406 aa (fragment).	Human Gene Similar to SWISSNEW-ACC:Q02380 NADH-UBIQUINONE OXIDOREDUCTASE SGDH SUBUNIT PRECURSOR (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-SGDH) (CI-SGDH) - Bos taurus (Bovine), 189 aa.	UNCLAS Human Gene Similar to SWISSNEW-SIFIED ACC:Q02380 NADH-UBIQUINONE OXIDOREDUCTASE SGDH SUBUNIT PRECURSOR (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-SGDH) (CI-SGDH) - Bos taurus (Bovine), 189 aa.	Human Gene Similar to TREMBLNEW- ACC:BAA74864 KIAA0841 PROTEIN - HOMO SAPIENS (HUMAN), 641 aa (fragment).
UNCLAS	UNCLAS	UNCLAS	UNCLAS	SIFIED	UNCLAS	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Phe (1315)	Ser (1316)	Met (1317)	Pro (1318)	(1319)	Gly (1320)	Gly (1321)
Leu	ren ren	<u>=</u>	Ser	Met	Cys	n O
Ø	Ø	O	O	∢	O	O
651 CATCCTGCATGA T CCACTTGTGCAT C[T/G]AAACCAG CCCAGCCGCCA ACCCCCA	676 TAAACCAGCCCA A GCGCCAACCC CC[A/G]AAAGTT GGTCTGCAGTTA TATTAAT	693 CAACCCCCAAAA T GTTGGTCTGCAG T[T/C]ATATTAATT TGAGGTTGGAC CTGGG	217 GAATCAGAACTA T CAAGGATCAATT A[T/C]CCCAGCT CAATGTCAGGGT TCTTCA	430 ATTATAACTGGG T ATCCCAGTCAAC ATTAJAAGGTAGA ATTTCATTAACCT CAAG	598 CCGAGCCTAGT A GCCAGCGCGC GGC[AC]AGACA GAGCTGTCAGA GCGCGCGC	339 ACTGCACAGGG T ACCGAATCTCTG CC[T/C]CCCGCT CTGCAGCCAGG TGCTCCAA
942 cg43918287	943 cg43918287	944 cg43918287	945 cg37027086	946 cg42688841	947 cg42688841	948 cg40332814

10	1 (1p35)				
3.50E-82	5.30E-79 1	1.00E-75	7.20E-75	7.20E-75	2.40E-74
Human Gene Similar to SWISSPROT-ACC:P34624 HYPOTHETICAL 63.5 KD PROTEIN ZK353.1 IN CHROMOSOME III - Caenorhabdiiis elegans, 548 aa.	Human Gene Similar to SWISSPROT-ACC:P14555 PHOSPHOLIPASE A2, MEMBRANE ASSOCIATED PRECURSOR (EC 3.1.1.4) (PHOSPHATIDYLCHOLINE 2-ACYLHYDROLASE) (GROUP II PHOSPHOLIPASE A2) - Homo sapiens (Human), 144 aa.	Human Gene Similar to SPTREMBL-ACC:015488 GLYCOGENIN-2ALPHA - HOMO SAPIENS (HUMAN), 501 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to TREMBLNEW-ACC:BAA74845 KIAA0822 PROTEIN -HOMO SAPIENS (HUMAN), 1581 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	SIFIED	UNCLAS SIFIED	SIFIED
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Phe (1322)	(1323)	Gly (1324)	Ser (1325)	Pro (1326)	Lys (1327)
Se.	¥	nje	Gly	Leu	Asn
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2059 GCGTTTTCTCT CACGTCCGTCTG A[G/A]ATTTACTG AGGAATATTGTG CTGGC	451 GGAAGCCGCAC TCAGTTATGGCT TC[T/C]ACGGCT GCCACTGTGGC GTGGGTGG	GATATGATAGCT TGTCCTGAAACT G[A/G]GACTCCT GCGTGATAAC GCGTGATAAC	698 GTGTGAGGTCTG CCCGATCCGGG AT[G/A]GCTGCC GGTGGGTGATC GACGGTAG	861 ATGGCTCTTTCC GCCTGGCCCGA GCT/CJCGATCA GGCATCAAGGT GCCTGGAA	312 ACCAAATGCCAC TATTTTTCTCCC [A/CJTTGCGAAAA ATGAAGGAAATC ACGT
2059	451	156	869	861	312
949 cg43920571	950 cg44024149	cg43307245	952 cg39523553	953 cg39523553	954 cg3593325
949	950	951	952	953	954

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1.10E-71	1.10E-71	1.10E-71	3.20E-70	1.40E-69	1.40E-69	1.30E-68
UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.	Human Gene Similar to SPTREMBL-ACC:Q13492 CALM (TYPE I CALM PROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q13492 CALM (TYPE I CALMPROTEIN) - HOMO SAPIENS (HUMAN), 652 aa.	Human Gene Similar to TREMBLNEW- ACC:BAA76807 KIAA0963 PROTEIN - HOMO SAPIENS (HUMAN), 1366 aa.	Human Gene Similar to SWISSPROT-ACC:P55789 AUGMENTER OF LIVER REGENERATION (HERV1PROTEIN) - Homo sapiens (Human), 125 aa.	Human Gene Similar to SWISSPROT-ACC:P55789 AUGMENTER OF LIVER REGENERATION (HERV1PROTEIN) - Homo sapiens (Human), 125 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:088552 CLAUDIN-2 - MUS MUSCULUS (MOUSE), 230 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	SIFIED	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Glu (1328)	Asn (1329)	Ser (1330)	Gln (1331)	Arg (1332)	Pro (1333)	Met (1334)
Lys	Lys	Pro	Leu	Thr	Leu	<u>e</u> .
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325 CACGACCCACG AGATCATGGGG CCC[A/G]AGAAA AAGCACCTGGA CTACTTAAT	330 CCCACGAGATCA TGGGGCCCAAG AA[AC]AAGCAC CTGGACTACTTA ATTCAGT	382 CACAAATGAGAT GAATGTGAACAT C[C/T]CACAGTTG GCAGACAGTTTA TTTGA	TGCAGCCTCGTC CTCCTCCTGG C[A/T]GGCTCTG CACACTCTGCTC CTGGTA	412 GACACCCGCAC CCGGGCATGCT TCA[C/G]ACAGT GGCTGTGCCGC CTTCACAAT	421 ACCCGGGCATG CTTCACACAGTG GC[T/C]GTGCCG CCTTCACAATGA AGTGAAC	269 CAGAGATAATGC AGGCCAGGGAG GA(G/C)ATTGCA CTGGATGTCACC ATCATGG
325	330	382	508	412	421	269
955 cg41677120	956 cg41677120	cg41677120	958 cg39648832	cg42696021	960 cg42696021	961 cg34243633
955	926	957	958	626	096	961

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1.30E-68	2.30E-68	2.30E-68	2.30E-68	2.30E-68	2.10E-66
UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:088552 CLAUDIN-2 - MUSMUSCULUS (MOUSE), 230 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:Q14676 KIAA0170 PROTEIN -HOMO SAPIENS (HUMAN), 2089 aa.	Human Gene Similar to SPTREMBL- ACC:Q14676 KIAA0170 PROTEIN - HOMO SAPIENS (HUMAN), 2089 aa.	Human Gene Similar to SPTREMBL- ACC:Q14676 KIAA0170 PROTEIN - HOMO SAPIENS (HUMAN), 2089 aa.	Human Gene Similar to SPTREMBL- ACC:Q14676 KIAA0170 PROTEIN - HOMO SAPIENS (HUMAN), 2089 aa.	Human Gene Similar to SPTREMBL- ACC:O60309 KIAA0563 PROTEIN - HOMO SAPIENS (HUMAN), 870 aa.
UNCLAS	UNCLAS	S	UNCLAS SIFIED	UNCLAS	SIFIED
NON- UNCLA CONSERVATI SIFIED VE	NON- CONSERVATI VE	NON- CONSERVATI SIFIED VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Asn (1335)	Arg (1336)	Leu (1337)	Pro (1338)	Arg (1339)	Ala (1340)
ž.	Ā.	Pro	Ser	GIN	ř <u>ř</u>
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O	O	O	⊢	∢	ď
453 ACCGACATAAGA C ACTTGTTTTCCA G[C/T]TGGGGAG CAGCATGGCAA CCAGTGT	308 CCTGAGCTCCA GCCTTCCACCTC CA[C/G]AGACCA GCCTGTCACCTC TGAGCCC	317 CAGCCTTCCACC C TCCACAGACCAG CIC/TJTGTCACCT CTGAGCCCACAT CTCAG	325 CACCTCCACAGA CCAGCCTGTCAC C[T/C]CTGAGCC CACATCTCAGGC CACTAG	341 CCTGTCACCTCT GAGCCCACATCT C[A/G]GGCCACT AGGGGAAGAAA AAATAGG	291 TTCTCTAGTCCA CCAGGAGGCTA CA[A/G]CTCGGC TCTCAGGGTCAG GTAATGA
453	308	317	325	341	291
962 cg34243633	963 cg43942922	964 cg43942922	965 cg43942922	966 cg43942922	967 cg35133436
962	696	964	965	996	296

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5.80E-66	3.80E-62	5.10E-62	2.60E-61	2.60E-61	2.60E-61
Human Gene Similar to SWISSNEW-ACC:043182 RHO-GTPASE-ACT:043182 RHO-GTPASE-GTPASE-GTPASE-ACTIVATING PROTEIN RHOGAPX-1) - Homo sapiens (Human), 587 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD34394 NUCLEAR PORE COMPLEX INTERACTING PROTEIN NPIP - HOMO SAPIENS (HUMAN), 350 aa.	Human Gene Similar to SWISSPROT- ACC:Q04205 TENSIN - Gallus gallus (Chicken), 1744 aa.	Human Gene Similar to SWISSPROT-ACC:Q99653 CALCIUM-BINDING PROTEIN P22 (CALCIUM-BINDING PROTEIN CHP) - Homo sapiens (Human), 194 aa.	Human Gene Similar to SWISSPROT-ACC:Q99653 CALCIUM-BINDING PROTEIN P22 (CALCIUM-BINDING PROTEIN CHP) - Homo sapiens (Human), 194 aa.	Human Gene Similar to SWISSPROT-ACC:Q99653 CALCIUM-BINDING PROTEIN P22 (CALCIUM-BINDING PROTEIN CHP) - Homo sapiens (Human), 194 aa.
UNCLAS	UNCLAS SIFIED	SIFIED	UNCLAS	SIFIED	SIFIED
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Tyr (1341)	Cys (1342)	Ser (1343)	Gly (1344)	Trp (1345)	Gly (1346)
Asp	Arg .	Pro	Ser	Arg	Arg
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1289 GAGTGCACGCA TAAAGATGGAAG AG[G/T]ATGCACT ACTTTCTGATCC AGTGGA	287 ATTITAATTCCTT CCTGTCTACGGC [G/A]GTTGGACC TCCTGGCTCTCT GCTGGCTCTCT	681 TGGCTTCGGCTGC GCGGGCCATCA AT[C/T]CCAGCAT GGCTGCCCCCA GCAGTCC	347 CGAAAAGCAAAG TGCAGTTTGTTG C[T/C]TCGGCTG TTGAGTGGTTCG GGTCCA	488 TCTGGAAAGAAG GCATTGATGATC C[G/A]GTCCCCC AGTGGGTTGATG GCAAGT	524 GGGTTGATGGC AAGTTCTGGAAT CC[T/C]CTGGAA ATCTTCCCGGCT GAGAGTC
1289	287	681	347	488	524
968 cg44938009	969 cg43949821	970 cg39516123	971 cg42731307	972 cg42731307	973 cg42731307
896	696	970	971	972	973

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2.60E-61	7.00E-61	3.90E-60	1.70E-59	5.20E-58	1.60E-57	2.40E-57
Human Gene Similar to SPTREMBL-ACC:Q20716 F53B7.3 -CAENORHABDITIS ELEGANS, 267 aa.	Human Gene Similar to SPTREMBL-ACC:Q62184 T-COMPLEX PROTEIN 10C (TCP-10) - MUS MUSCULUS (MOUSE), 438 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD45423 EH DOMAIN-CONTAINING PROTEIN EHD1 - MUSMUSCULUS (MOUSE), 534 aa.	Human Gene Similar to SPTREMBL-ACC:033196 HYPOTHETICAL 32.9 KD PROTEIN - MYCOBACTERIUM TUBERCULOSIS, 307 aa.	Human Gene Similar to SPTREMBL-ACC:Q14185 DOCK180 PROTEIN -HOMO SAPIENS (HUMAN), 1865 aa.	Human Gene Similar to SWISSPROT-ACC:Q14693 HYPOTHETICAL PROTEIN KIAA0188 - Homo sapiens (Human), 899 aa (fragment).	UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:BAA83061 KIAA1109 PROTEIN - HOMO SAPIENS (HUMAN), 1957 aa (fragment).
UNCLAS SIFIED	UNCLAS	SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
Asn (1347)	Glu (1348)	Ser (1349)	Gly (1350)	His (1351)	Thr (1352)	Ala (1353)
Lys	Lys	Arg	n B	-B	<u>el</u>	Ser
-	Ø	∢	o o	 -	O	Ø
U	⋖	O	<	_o	⊢	L-
648 TGCCTTTGGAAC AGGAATATGAAA AGCTJAAACTCAG AGCCGAGTTAGT GGAAA	149 TCGAAAGGAAGT, GAGTGCAGATG GG[A/G]AGACCA TCACTGTCACTT TCTTTAA	448 CGCTAATGCCAA GAAGGAGATGG TG[C/A]GCTCCA AGCTGCCCAACA GTGTGCT	724 CTTGACATCCAG CCAGACGGTTCA G[A/G]ATCAGCG GTTCTGTGGTGC GACGGG		31 TGTGATAAAAGT CACTTTCAGGCC A[T/C]TCACAGC GAATCTTCAGAC	276 ACAAATTACTAT GGGTTCTACTGA A[T/G]CTCGGGT TGACTACATGGG CTCAAG
648	149	448	724	322	31	276
974 cg44910937	975 cg43335624	976 cg43277268	977 cg44128084	978 cg30455661	979 cg42747615	980 cg43153425
974	975	976	977	978	979	980

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2.50E-56	5.30E-56	3.30E-54	6.10E-54	6.10E-54	4.20E-53
UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:060925 PREFOLDIN SUBUNIT 1 - HOMO SAPIENS (HUMAN), 122 aa.	Human Gene Similar to SWISSPROT- ACC:P44788 SUN PROTEIN (FMU PROTEIN) - Haemophilus influenzae, 451 aa.	Human Gene Similar to SPTREMBL-ACC:043914 DNAX ACTIVATION PROTEIN 12 - HOMO SAPIENS (HUMAN), 113 aa.	Human Gene Similar to SPTREMBL-ACC:O46082 EG:63B12.2 PROTEIN -DROSOPHILA MELANOGASTER (FRUIT FLY), 254 aa.	Human Gene Similar to SPTREMBL-ACC:O46082 EG:63B12.2 PROTEIN -DROSOPHILA MELANOGASTER (FRUIT FLY), 254 aa.	Human Gene Similar to SWISSPROT-ACC:P31639 SODIUM/GLUCOSE COTRANSPORTER 2 (NA(+)/GLUCOSE COTRANSPORTER 2) (LOW AFFINITY SODIUM-GLUCOSE COTRANSPORTER) - Homo sapiens (Human), 672 aa.
S	SIFIED	SIFIED	SIFIED	SIFIED	SIFIED
NON- UNCLA CONSERVATI SIFIED VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE
lle (1354)	End (1355)	Tyr (1356)	Тгр (1357)	Gly (1358)	Ser (1359)
Ser	Lys	Asp	ren Len	- Se	o O
⋖	<u> </u>	⋖	O	ပ	F
O	۷	O	⋖	l ⊢	O
1093 TATTITCTGCTTCC TCTAACAGCTGA [C/A]TGTGAATTG CTTCCTTGGACT GAAG	173 GATAGTGGTGTG TGGTGATGCGA GT[A/T]AACCTGA CGAATGGTTAGC TGAAAT	445 GGGCTCACCGT AGAGCAACTGCA ATIC/AJGCTCTG GGCCTGGGCCT	464 AGGGCAACTTGT GGGCAACCTGG TC[A/C]AGGAAA CCTTGACTTCTT CAAATTC	588 CCTCCCCCCATG CGATGCCCAACA C[T/C]TTTGCGAG TGATGGGCTTGA AAGGG	686 CCCACCTCGTTC GTGCTCCCACC CT[C/T]CCCAGCT CCACCGCCTGG TCTTCAG
1093	173	445	464	288	989
981 cg43968980	982 cg30384142	983 cg43957773	984 cg43931038	985 cg43931038	986 cg43971060
981	982	688	984	985	986

6.40E-51	1.30E-163	1.30E-163	1.70E-175	1.70E-175
UNCLAS Human Gene Similar to SWISSNEW-SIFIED ACC:035775 SYNCOLLIN (SIP9) - Rattus norvegicus (Rat), 145 aa.	Human Gene SWISSPROT- ID:O14520 AQUAPORIN-7 LIKE (AQUAPORIN ADIPOSE) (AQPAP) - HOMO SAPIENS (HUMAN), 342 aa.	water_ch Human Gene SWISSPROT- annel ID:O14520 AQUAPORIN-7 LIKE (AQUAPORIN ADIPOSE) (AQPAP) - HOMO SAPIENS (HUMAN), 342 aa.	ATPase_ Human Gene SPTREMBL-ID:Q29466 associate VACUOLAR H+-ATPASE SUBUNIT d (EC 3.6.1.34) (H(+)-TRANSPORTING ATP SYNTHASE) (H(+)- TRANSPORTING ATPASE) (MITOCHONDRIAL ATPASE) (CHLOROPLAST ATPASE) (COUPLING FACTORS (F(0), F(1) AND CF(1))) - BOS TAURUS (BOVINE), 838 aa.	ATPase_ Human Gene SPTREMBL-ID:Q29466 associate VACUOLAR H+-ATPASE SUBUNIT d (EC 3.6.1.34) (H(+)-TRANSPORTING ATP SYNTHASE) (H(+)- TRANSPORTING ATPASE) (MITOCHONDRIAL ATPASE) (CHLOROPLAST ATPASE) (COUPLING FACTORS (F(0), F(1) AND CF(1))) - BOS TAURUS (BOVINE), 838 aa.
	water_ch annel	water_ch annel	ATPase_ associate d	ATPase_ associate d
NON- CONSERVATI VE	NON- CONSERVATI VE	NON- CONSERVATI VE	FRAMESHIFT	FRAMESHIFT
Arg (1360)	Leu (1361)	Met (1362)	Gly (1363)	Gly (1364)
Leu	о С	Тh	Giy	ġỳ.
<u>o</u>	⋖	⋖	gap	dap
F	<u>ග</u>	ر ن	ប	ပ
541 TTCTCTGCCGGC ACCTACCCGCG CC[T/G]GGAGGA GTACCGCCGGG GCATCTTA	145 TCTGTTGGCAGG G GCTCACAGAGA CG[G/A]GGGTGA GGGGAGAGATC GTGGGTTC	163 AGAGACGGGGG TGAGGGGAGAG ATCIG/AJTGGGTT CATGAGATCCCA TCTTGGG	440 CCACAGCGGCC ACGCCCACCTC CCG[G/gap]CCCA GGCCCAGGCCT ATGCGCATCA	446 CCGCCACGCCC ACCTCCCGGCC CAG[G/gap]CCCA GGCCTATGCGC ATCACCATGG
541	145	163	440	446
987 cg44010070	988 cg43298242	989 cg43298242	990 cg43300636	991 cg43300636
987	986	686	066	00

10 (10q24)	1	19 (19p13.3	-	5 (5q33)	5 (5933)
1.40E-100	9.40E-58	8.40E-78	4.10E-183	3.90E-74	3.90E-74
ATPase_ Human Gene Similar to TREMBLNEW-associate ID:G2921585 ECTO-ATPASE - MUSd MUSCULUS (MOUSE), 495 aa.	ATPase_ Human Gene Similar to SPTREMBL-associate ID:Q15332 GAMMA SUBUNIT OF SODIUM POTASSIUM ATPASE LIKE-HOMO SAPIENS (HUMAN), 126 aa.	cadherin Human Gene Similar to SWISSPROT-ID:P05362 INTERCELLULAR ADHESION MOLECULE-1 PRECURSOR (ICAM-1) (MAJOR GROUP RHINOVIRUS RECEPTOR) (CD54) - HOMO SAPIENS (HUMAN), 532 aa.	Human Gene SWISSPROT. ID:P43235 CATHEPSIN K PRECURSOR (EC 3.4.22.38) (CATHESPIN O) (CATHEPSIN X) (CATHEPSIN O2) - HOMO SAPIENS (HUMAN), 329 aa.	Human Gene Similar to SWISSPROT- ID:P98119 SALIVARY PLASMINOGEN ACTIVATOR ALPHA 1 PRECURSOR (EC 3.4.21.68) (DSPA ALPHA-1) - DESMODUS ROTUNDUS (VAMPIRE BAT), 477 aa.	Human Gene Similar to SWISSPROT- ID:P98119 SALIVARY PLASMINOGEN ACTIVATOR ALPHA 1 PRECURSOR (EC 3.4.21.68) (DSPA ALPHA-1) - DESMODUS ROTUNDUS (VAMPIRE BAT), 477 aa.
ATPase_ associate d	ATPase_ associate d	cadherin	cathepsi n	cathepsi n	cathepsi n
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Cys (1365)	Arg (1366)	Cys (1367)	Ala (1368)	Ala (1369)	Ala (1370)
Leu	Pro	Val	Gly	Gly	Gly
gap	gap	дар	gap	dap	дар
4 (C) (E	0	5	O	ပ	o d
193 CTGTGGGGTTGAA CCCAGAACAAG C(A/gap)TTGCCA GAAAACGTTAAG TATGGGA	360 GGCCCCAGTGC AGTGGGTGGCA CCG[C/gap]CGAG GCTGCTGTTACG GCTCATCTT	284 GCTCCTGCCTG GGAACAACCGG AAG[G/gap]TGTA TGAACTGAGCAA TGTGCAAGA	1150 TTTGCCAGTTTT CTTCTTGAGTTG G[C/gap]CCTCCA GGGCACCCACA GAGCTAAA	1893 CGATGCGTGCC AGGGTGATTCC GGA[G/gap]GCC CGCTGGTGTGT GAGGACCAAGC	1894 GATGCGTGCCA GGGTGATTCCG GAG[G/gap]CCC GCTGGTGTGTGA GGACCAAGCT
193	360	284	1150	1893	1894
992 cg43250373	993 cg43132502	994 cg42528468	995 cg43264626	996 cg43132668	997 cg43132668
766	366	766	366) 66	997

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5.60E-76	4.10E-70	6.00E-118	0.00E+00	3.00E-123	2.70E-76
glycoprot Human Gene Similar to SWISSPROT- ein ID:Q13491 NEURONAL MEMBRANE GLYCOPROTEIN M6-B - HOMO SAPIENS (HUMAN), 283 aa (fragment).	Human Gene Similar to SWISSPROT-ID:P53973 HISTONE DEACETYLASE HDA1 - SACCHAROMYCES CEREVISIAE (BAKER'S YEAST), 706 aa.	homeobo Human Gene Homologous to x SPTREMBL-ID:O00503 CAUDAL- TYPE HOMEOBOX PROTEIN 2 - HOMO SAPIENS (HUMAN), 313 aa.	hydroxyst Human Gene SWISSPROT- eroid ID:P51659 ESTRADIOL 17 BETA- DEHYDROGENASE 4 (EC 1.1.1.62) (17-BETA-HSD 4) (17-BETA- HYDROXYSTEROID DEHYDROGENASE 4) - HOMO SAPIENS (HUMAN), 736 aa.	isomeras Human Gene Homologous to SPTREMBL-ID:Q13907 HOMOLOG OF YEAST IPP ISOMERASE - HOMO SAPIENS (HUMAN), 228 aa.	Human Gene Similar to TREMBLNEW- ID:D1025880 ZIP-KINASE - HOMO SAPIENS (HUMAN), 454 aa.
glycoprot	histone	homeobo x	hydroxyst eroid	isomeras e	kinase
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Lys (1371)	Gln (1372)	Thr (1373)	Ala (1374)	Val (1375)	Gly (1376)
Lys	Ser	Ser	Ala	Val	Ala
gap	дар	дар	dag	дар	gap
<	O	Ø		o o	U
198 AAAGCTAATTGA GACCTATTTCTC C[A/gap]AAAACT ACCAAGACTATG AGTATCT	2549 GGCCCCCACTAT CAGGGGCCCTG GC[C/gap]TCAAT CACTGAGACCAT CCAAGTCC	881 TGCGAGTGGAT GCGGAACCGGC GCA[G/gap]CAGT CCCTCGGCAGC CAAGTGAAAA	483 TCTGGCTCAGCA TGATGTTCCCTC T[G/gap]GCCTTC AGCCTGCCACTA AAGAATG	1811 GCTTATTTTCGG TGTTGAATAAGA A[G/gap]ACACTA AAAGCTCGATGC AATAATC	156 CGCTTCTCCAAG GTGCTGGAGGA GG[C/gap]GGCG GCGCCGAGGA GGGCCTGCGC
198	2549	881	483	1811	156
998 cg44924334	999 cg43303165	1000 cg42489148	1001 cg43929210	1002 cg44004587	1003 cg41501665
866	666	1000	1001	1002	1003

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			15 (15q25)	27	6 (6q22)
2.70E-76	2.70E-76	2.70E-76	0.00E+00	9.30E-280	0.00E+00
Human Gene Similar to TREMBLNEW-ID:D1025880 ZIP-KINASE - HOMO SAPIENS (HUMAN), 454 aa.	Human Gene Similar to TREMBLNEW-ID:D1025880 ZIP-KINASE - HOMOSAPIENS (HUMAN), 454 aa.	Human Gene Similar to TREMBLNEW-ID:D1025880 ZIP-KINASE - HOMO SAPIENS (HUMAN), 454 aa.	Human Gene SWISSPROT- ID:Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (TRKC TYROSINE KINASE) (GP145-TRKC) (TRK-C) - HOMO SAPIENS (HUMAN), 839 aa.	Human Gene SWISSPROT- ID:P36896 SERINE/THREONINE- PROTEIN KINASE RECEPTOR R2 PRECURSOR (EC 2.7.1.37) (SKR2) (ACTIVIN RECEPTOR-LIKE KINASE 4) (ALK-4) (ACTR-IB) - HOMO SAPIENS (HUMAN), 505 aa.	Human Gene SWISSPROT- ID: P24043 LAMININ ALPHA-2 CHAIN PRECURSOR (LAMININ M CHAIN) (MEROSIN HEAVY CHAIN) - HOMO SAPIENS (HUMAN), 3110 aa.
kinase	kinase	kinase	kinasere ceptor	kinasere ceptor	laminin
FRAMESHIFT kinase	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Cys (1377)	Ser (1378)	Pro (1379)	Arg (1380)	Ala (1381)	Leu (1382)
nen	ren Fen	Ala	о С	Arg	ren
gap	gap	gap	gap	gap	gap
ر ن	ر ت	O	O	O	O
184 CGGCCGCCGAG GAGGGCCTGCG CGA[G/gap]CTGC AGCGCAGCCGG CGGCTCTGCC	TGCGCGAGCTG CAGCGCAGCCG GCG[G/gap]CTCT GCCACGAGGAC GTGGAGGCGC	232 GCCACGAGGAC GTGGAGGCGCT GGC[C/gap]GCCA TCTACGAGGAGA AGGAGGCCT	342 CAAGACTGAGAT CAATTGCCGGC GG[C/gap]CGGA CGATGGGAACC TCTTCCCCCT	TCTGGATGGGAT GGAGCACCATG TG[C/gap]GCACC TGCATCCCCAAA GTGGAGCT	CTCCAAACAGCT TCTTCACTTITTT [C/gap]AGAAGGG CTTCTGCAGCTA CCAACT
184	202	232	342	661	4377
1004 cg41501665	1005 cg41501665	1006 cg41501665	1007 cg43939695	1008 cg29023997	1009 cg43983535
1004	1005	1006	1007	1008	1009

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			17 (17q11.2)	1	2 (2p12)
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9.80E-261	9.80E-261	9.80E-261	0.00E+00	0.00E+00	0
80E	80E	80E	00.	.00	
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Human Gene SWISSPROT- ID:P54317 PANCREATIC LIPASE RELATED PROTEIN 2 PRECURSOR (EC 3.1.1.3) - HOMO SAPIENS (HUMAN), 469 aa.	Human Gene SWISSPROT- ID:P54317 PANCREATIC LIPASE RELATED PROTEIN 2 PRECURSOR (EC 3.1.1.3) - HOMO SAPIENS (HUMAN), 469 aa.	Human Gene SWISSPROT-ID:P54317 PANCREATIC LIPASE RELATED PROTEIN 2 PRECURSOR (EC 3.1.1.3) - HOMO SAPIENS (HUMAN), 469 aa.	Human Gene SWISSPROT- ID:P20393 V-ERBA RELATED PROTEIN EAR-1 - HOMO SAPIENS (HUMAN), 614 aa.	Human Gene SPTREMBL-ID:Q60974 NUCLEAR RECEPTOR CO- REPRESSOR - MUS MUSCULUS (MOUSE), 2453 aa.	oncogen Human Gene SWISSPROT- ID:Q00918 LATENT TRANSFORMING GROWTH FACTOR BETA BINDING PROTEIN 1 PRECURSOR (TRANSFORMING GROWTH FACTOR BETA-1 BINDING PROTEIN 1) (TGF-BETA1-BP-1) (TRANSFORMING GROWTH FACTOR BETA-1 MASKING PROTEIN, LARGE SUBUNIT) - RATTUS NORVEGICUS (RAT), 1712 aa.
FRAMESHIFT lipase	lipase	lipase	nucl_rec pt	nucl_rec pt	e e
					
HS H	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
AME	AME E	AME E	AME E	AME	AME
F	г д	д	R.	A.	<u> </u>
Thr (1383)	Ser (1384)	Gly (1385)	Gly (1386)	Lys (1387)	(1388)
His	s O	Ala	Arg	ng	Asn
gap	gap	gap	gap	gap	дар
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o	O	<u>ග</u>	O	O	∢
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TAA CCC ICAT	TTG TCC 3AC/	S S S S S S S S S S S S S S S S S S S	SCT SGC SGC SCT SA	EEE &	AGT CTC/ CTC/ NGTC
CAG PPIC SGG SCT	GCA ATT apja TGC	000 3/ga 1000 1000 1000	CAC GAC SGG CTG		AAAA GCT CCA GAT
480 TTCCCCTTAAAT TGGTCAGCATAG T[G/gap]CCCCAT TTTGGGGCATCC TTCAGCT	494 GTCAGCATAGTG CCCCATTTTGGG G[C/gap]ATCCTT CAGCTGGACAA GGGAAACA	923 CACGCGGCCCC CCAGCCTCCTG CCC[G/gap]CCTC CGCGGCCGTGT GCGCGCCAG	GGAGCAGCTCC AGGAGACGCTG CTG[C/gap]GGGC TCTTCGGGCTCT GGTGCTGAA	6644 TCTTTCTTTTCTT CTTCTTTTTTTT C/gap]TGTTTTTT CTGCTTTATCCT	4055 GAAGAAAGAAA GAATGCTACTAT A[A/gap]TCTCAAT GACGCCAGTCT CTGTGAT
	2 QQQQQQ	<u>ប្បុប្បុច្ច</u> ពួ	0 <u>4 0 ¥ 0</u>	4 E0000	25 2 A D D
4	34	36	2329	799	405
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888	888	8887	4906	910	1967
g424	g424	g424	g432	g439	9439
1010 cg42488873	1011 cg42488873	1012 cg42488873	1013 cg43249083	1014 cg43991048	1015 cg43919677
9	10	10	6	9	10
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2.9E-244	3.1E-98	3.1E-98	3.1E-98	1.3E-57	1.3E-57
Human Gene SPTREMBL-ID:060875 LFC ONCOGENE - MUS MUSCULUS (MOUSE), 573 aa.	Human Gene Similar to TREMBLNEW-ID:G332185 TRANSFORMING PROTEIN (P21 HAS) - HARVEY MURINE SARCOMA VIRUS, 241 aa.	Human Gene Similar to TREMBLNEW-ID:G332185 TRANSFORMING PROTEIN (P21 HAS) - HARVEY MURINE SARCOMA VIRUS, 241 aa.	Human Gene Similar to TREMBLNEW-ID:G332185 TRANSFORMING PROTEIN (P21 HAS) - HARVEY MURINE SARCOMA VIRUS, 241 aa.	Human Gene Similar to SWISSPROT-ID:P25155 COAGULATION FACTOR X PRECURSOR (EC 3.4.21.6) (STUART FACTOR) (VIRUS ACTIVATING PROTEASE) (VAP) - (GALLUS GALLUS (CHICKEN), 475 aa.	Human Gene Similar to SWISSPROT- ID:P25155 COAGULATION FACTOR X PRECURSOR (EC 3.4.21.6) (STUART FACTOR) (VIRUS ACTIVATING PROTEASE) (VAP) - GALLUS GALLUS (CHICKEN), 475 aa.
e e	oncogen e	e e	e e	protease .	protease
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Glu (1389)	Gly (1390)	Ala (1391)	Ala (1392)	Arg (1393)	Ala (1394)
Ala	Val	Gly	Gly	ng gin	Ala
gap	gap	gap	gap	gap	O
o o	⊢	.g	_o	O	de6
3546 CATCAGCTCACT GTAGATTACCTC T[G/gap]CTTCGT CAATGAGGGATT CCACGGA	75 ATGACGGAATAT AAGCTGGTGGT GG[T/gap]GGGC GCCGGCGGTGT GGGCAAGAGT	76 TGACGGAATATA AGCTGGTGGTG GT[G/gap]GGCGC CGGCGGTGTGG GCAAGAGTG	77 GACGGAATATAA GCTGGTGGTGG TG[G/gap]GCGCC GGCGGTGTGGG CAAGAGTGC	900 AGCTCCAGCAGT GACAGGTCATTC T[C/gap]CCCCGC GTCCGCGTCATA CCGCATG	904 CAGCAGTGACA GGTCATTCTCCC CC[gap/C]GCGTC CGCGTCATACC GCATGTGCA
3546	75	76	77	006	906
1016 cg43997978	1017 cg43916615	1018 cg43916615	1019 cg43916615	1020 cg43069905	1021 cg43069905
1016	1017	1018	1019	1020	1021

0 3 (3927)		15 (15q21)	2 (2cen)	
3 (8)		(15)	2 (2)	
0	7.6E-56	0	4.3E-188	2.2E-56
proteasei Human Gene SWISSPROT- nhib ID:P01042 KININOGEN, HMW PRECURSOR (ALPHA-2-THIOL PROTEINASE INHIBITOR) (CONTAINS: BRADYKININ) - HOMO SAPIENS (HUMAN), 644 aa.	ribosoma Human Gene Similar to SWISSPROT- Iprot ID:P49207 60S RIBOSOMAL PROTEIN L34 - HOMO SAPIENS (HUMAN), 116 aa.	Human Gene SWISSPROT- ID:Q02440 DILUTE MYOSIN HEAVY CHAIN, ISOFORM I (MYOSIN HEAVY CHAIN P190) (MYOSIN-V) - GALLUS GALLUS (CHICKEN), 1829 aa.	Human Gene SWISSNEW-ID:P40121 MACROPHAGE CAPPING PROTEIN (ACTIN-REGULATORY PROTEIN CAP-G) - HOMO SAPIENS (HUMAN), 348 aa. pcls:SWISSPROT-ID:P40121 MACROPHAGE CAPPING PROTEIN (ACTIN-REGULATORY PROTEIN CAP-G) - HOMO SAPIENS (HUMAN), 348 aa.	Human Gene Similar to SWISSNEW- ID:P54876 PHOSPHORIBOSYLFORMYLGLYCIN AMIDINE SYNTHASE II (EC 6.3.5.3) (FGAM SYNTHASE II) - MYCOBACTERIUM TUBERCULOSIS, 754 aa.
proteasei nhib	ribosoma Iprot	struct	struct	synthase
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
(1395)	Val (1396)	Pro (1397)	(1398)	Thr (1399)
<u>•</u>	Gly	о С	Ala	Asp
gap	gap	gap	gap	gap
4	O	O	<u>o</u>	ပ
904 ATGCATACATCG ATATTCAGCTAC G[A/gap]ATTGCT TCCTTCTCACAG AACTGTG	720 CCTCGAAGTCTG CCTGGGCACAC AC[C/gap]ACATG CAGATTTTGGTG CTTTCCCA	5050 GATTCAGGGCG TGTCTGGGGTGA AG[C/gap]CCACA GGGTTGAGAAA GCGAACCTC	GAAGAAGACGC CCTGGTTCTCTT GC[G/gap]CCACA GGCACCGGCTT CAGCTTCTC	293 ATCTCTTCAGGG GCGAGGTTCGG GT[C/gap]GCGCA GCGGAACGCGG TCGAGCTCG
904	720	9050	1130	293
1022 cg44028327	1023 cg43940280	1024 cg43974196	1025 cg43916919	1026 cg21428405
1022	1023	1024	1025	1026

3925)		2	-	4 (4q21)	12
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2.2E-207 3 (3q25)	1.4E-237	1.1E-68	0	0	0
Human Gene SWISSPROT- ID:P26022 PENTAXIN-RELATED PROTEIN PTX3 PRECURSOR (TUMOR NECROSIS FACTOR- INDUCIBLE PROTEIN TSG-14) - HOMO SAPIENS (HUMAN), 381 aa.	transcript Human Gene SWISSPROT- factor ID:Q14209 TRANSCRIPTION FACTOR E2F2 (E2F-2) - HOMO SAPIENS (HUMAN), 437 aa.	Human Gene Similar to SPTREMBL-ID:Q29121 UDP-GALNAC:POLYPEPTIDE ALFA-1,O N-ACETYLGALACTOSAMINYLTRANSFERASE - SUS SCROFA (PIG), 559 aa.	Human Gene SWISSPROT- ID:P41226 UBIQUITIN-ACTIVATING ENZYME E1 HOMOLOG (D8) - HOMO SAPIENS (HUMAN), 1011 aa.	Human Gene SWISSNEW- ACC:Q13563 POLYCYSTIN 2 (AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE TYPE II PROTEIN) (POLYCYSTWIN) (R48321) - Homo sapiens (Human), 968 aa.	Human Gene SPTREMBL- ACC:075176 KIAA0692 PROTEIN - HOMO SAPIENS (HUMAN), 783 aa (fragment).
tnf	transcript factor	transfera se	ubiquitin	UNCLAS SIFIED	UNCLAS SIFIED
FRAMESHIFT tnf	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Lys (1400)	Gly (1401)	(1402)	Gly (1403)	Lys (1404)	Met (1405)
Arg	Gly	Phe	Arg	Lys	Arg
gap	дар	gap	gap	gap	V
o	ا ت	4	V	_	gap
290 ATCATGCTGGAG (AACTCGCAGATG AG(gap)AGAGCG CATGCTGCTGCACAAAGCAAGCAAGCAAGCAAGCAAGCAA	GGGCGCCTTAC TCGCTATGCTGC AA[G/gap]GGCCC CGGGCCTTGGC TTCGGCCGC	CCCACTGGAAGT/ GGAGGCTCCAG TC[A/gap]AACCC CCCTCTGAGCTC	1227 GCGGACAGTCG A CCCTAAGCAGTG CA[A/gap]GGTGT CTTGAGCCCTAT GGTGGCCA	2853 GAAÁTGTCATCC 1 ACGGTATTTTTTT [T/gap]CAGTTTTA GTTTGACCAAAG CTTTA	2640 ATGTCATCTTCA [8 TCTAGAAACGCC C[gap/A]TCACGG AAATGGAATTGC TGCCAGA
290	438	1391	1227	2853	2640
1027 cg43336100	1028 cg39517655	1029 cg43954704	1030 cg43986426	1031 cg43917221	1032 cg43918356
1027	1028	1029	1030	1031	1032

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0		0	0	0	0	0
Human Gene SWISSPROT- ACC:P35446 F-SPONDIN PRECURSOR - Rattus norvegicus (Rat), 807 aa.	Human Gene SWISSNEW- ACC:Q13496 MYOTUBULARIN - Homo sapiens (Human), 603 aa.	Human Gene SWISSPROT- ACC:P49746 THROMBOSPONDIN 3 PRECURSOR - Homo sapiens (Human), 956 aa.	Human Gene SWISSPROT- ACC:P13521 SECRETOGRANIN II PRECURSOR (SGII) (CHROMOGRANIN C) - Homo sapiens (Human), 617 aa.	Human Gene SPTREMBL-ACC:060342 KIAA0602 PROTEIN -HOMO SAPIENS (HUMAN), 962 aa (fragment).	Human Gene SWISSPROT- ACC:P38432 P80-COILIN - Homo sapiens (Human), 576 aa.	Human Gene SPTREMBL-ACC:O60281 KIAA0530 PROTEIN -HOMO SAPIENS (HUMAN), 1563 aa (fragment).
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UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Ser (1406)	Pro (1407)	Ser (1408)	Asp (1409)	Ala (1410)	Pro (1411)	Glu (1412)
Ser	Pro	Ser	<u> </u>	Arg	Ala	Glu
gap	gap	gap	gap	gap	gap	gap
O	o .	o,	O	o o	O	<u>-</u>
2812 CTTTCCCACATG ACTTGTTACATT C[C/gap]GACCAC TGGGACCACTC GGTGAGCT	57 TAAAAGTTATTCT CCAATGGTGATT [G/gap]GGCAAGC CCTGCCTCCTGT ATTCTT	1344 GGGTAGGATTG CTCATTTCAGGG CA[G/gap]CTGTC GCAAGCATCTCC CACCCGT	1192 CATCTAGGTCAA CAGGAAGGTCA AG[C/gap]TCCCG CTCCGGTTCCAC TGATCCAT	2979 GTTCTGTTGTTGTGCGCTTTCTGCGGGADJCTGCAGCCTTCTGCAGCTTTCTGCAGCATCTGAAGCTTGAAGCTTGAAGCTTGAAGCTTGAAGCTTGTTGAAGCTTGTTG	2673 CCCTCCAGGTA GAGGCCTAGGA AGG[C/gap]CCCA GAACTGAAGCC GAACTGAAGCC	3941 TTCTGTTTTGTC AGGACTTTTTTT [T/gap]CTACAAG TTGTTTTTCTGG GATCAC
78	2857	13	11	59.	56.	6 8
1033 cg43918446	1034 cg43927750	1035 cg43961075	1036 cg43961763	1037 cg43968223	1038 cg43980727	1039 cg43999667
1033	1034	1035	1036	1037	1038	1039

	19	6	22	 	1	9
O		0	1.7E-304	4.5E-280	6.10E-268	4.10E-221
Human Gene SPTREMBL- ACC:Q14692 KIAA0187 PROTEIN - HOMO SAPIENS (HUMAN), 1282 aa.	Human Gene SPTREMBL- ACC:O60624 CLASS I CYTOKINE RECEPTOR - HOMO SAPIENS (HUMAN), 636 aa.	Human Gene SPTREMBL- ACC:Q92574 HAMARTIN (MYELOBLAST KIAA0243) - HOMO SAPIENS (HUMAN), 1164 aa.	Human Gene SWISSNEW- ACC:P46060 RAN-GTPASE ACTIVATING PROTEIN 1 - Homo sapiens (Human), 587 aa.	UNCLAS Human Gene SPTREMBL- SIFIED ACC:Q15830 MUTY HOMOLOG - HOMO SAPIENS (HUMAN), 535 aa.	Human Gene SPTREMBL- ACC:O75907 ACAT RELATED GENE PRODUCT 1 - HOMO SAPIENS (HUMAN), 488 aa.	UNCLAS Human Gene SPTREMBL- SIFIED ACC:060747 PUTATIVE G-BINDING PROTEIN - HOMO SAPIENS (HUMAN), 562 aa (fragment).
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Pro (1413)	Trp (1414)	Arg (1415)	Asp (1416)	Asp (1417)	Arg (1418)	His (1419)
Pro	nen	rd .	Asp	Asp	ujg Ligi	His
gap	gap	gap	gab	gap	gap	gap
	O	g	_ල	g	L	4
3927 GTATCAAAGTGC T TCTTTCCAACTTT [T/gap]GGAGGCC CCATCACCACTA CCGGTA	671 CGTGGACTTTTC CGAGGATGACC CC[C/gap]TGGAGGAGGAGGAGGAGGAGGAGAGGAGGAGGAGGAGGAG	2612 TCTACAACCAGA (GCCAGGAATTAC A[G/gap]ACGAAG CTGGAGGACTG CAGGAACA	1167 GGGGTGCAAGG C GCCTTGGGGAA ATA[G/gap]TCCT GCTGCACCATGT GGTTCAGCG	1264 CCTCCTCCAGG C GAAGCACTGGC CAG[G/gap]TCCT GCAGTGTAGGC CACTTCTGCA	427 CACAGCTGCGTT T GCCATAGTTGCC C[T/gap]GGAAAA AGCGGCCCACG AACCAGGC	2313 TAAATTTGACTTT A TCTCATGTAAAA[A/gap]TGTCTAAT GCGATGTATTTG GTAAT
3927	571	2612	1167	1264	427	2313
1040 cg44022781	1041 cg44919370	1042 cg44932924	1043 cg43991434	1044 cg44931278	1045 cg43949042	1046 cg43972066
1040	1041	1042	1043	1044	1045	1046

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215	-215	-210	-192	-174	-161
2.80E-215	2.80E-215	7.20E-210	1.30E-192	1.80E-174	2.50E-161
Human Gene SPTREMBL- ACC:O15417 CAGL79 - HOMO SAPIENS (HUMAN), 413 aa (fragment).	Human Gene SPTREMBL- ACC:015417 CAGL79 - HOMO SAPIENS (HUMAN), 413 aa (fragment).	Human Gene SPTREMBL-ACC:Q99541 ADIPOPHILIN - HOMO SAPIENS (HUMAN), 437 aa (fragment).	Human Gene SPTREMBL- ACC:O14877 FRPHE - HOMO SAPIENS (HUMAN), 346 aa.	Human Gene SWISSPROT- ACC:P42081 T LYMPHOCYTE ACTIVATION ANTIGEN CD86 PRECURSOR (ACTIVATION B7-2 ANTIGEN) (CTLA-4 COUNTER- RECEPTOR B7.2) (B70) (FUN-1) (BU63) - Homo sapiens (Human), 329 aa.	Human Gene TREMBLNEW. ACC:BAA74892 KIAA0869 PROTEIN - HOMO SAPIENS (HUMAN), 888 aa (fragment).
UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS SIFIED
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Gin (1420)	Asn (1421)	Leu (1422)	Cys (1423)	(1424)	Gly (1425)
Pro ·	Asn	Ser	nen	บ็	olo.
gap	gap	gap	gap	gap	gap
U	o	O	ى ت	O	«
723 GGGGGTACTGG C GGACCTCGTCT GTT[G/gap]GGTT CCCCTCCTCCAG GGTAGCGGC	725 GGGTACTGGGG CACCCGTCTGTT GG[G/gap]TTCCCCCGGGGTAGGTAGGGGTTCCCCAGGGTAGGGTAG	391 CTGCCTATTCTG CAACCAGCAGCAGT (C/gap)TGAGAT TGTTGCCAATGCCAATGCCAAGGT CCGAGGT	2370 TACATGGCACAG	334 CTCTGGTGCTGC TCCTCTGAAGAT T[C/gap]AAGCTT ATTTCAATGAGA CTGCAGA	251 GAGGAGGAGGA A GGTGGAGGAGG AGG[Agap]GGGA GAAGAGGATGTT TTCACCGAG
723	725	391	2370	334	251
1047 cg43955639	1048 cg43955639	1049 cg43965656	1050 cg43944615	1051 cg43323906	1052 cg44004690
1047	1048	1049	1050	1051	1052

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2.50E-161	1.40E-160	6.70E-159	1.30E-155	3.00E-152	1.60E-150
Human Gene TREMBLNEW- ACC:BAA74892 KIAA0869 PROTEIN - HOMO SAPIENS (HUMAN), 888 aa (fragment).	Human Gene TREMBLNEW- ACC:AAD27734 CGI-25 PROTEIN - HOMO SAPIENS (HUMAN), 301 aa.	Human Gene TREMBLNEW- ACC:AAD39906 FH1/FH2 DOMAIN- CONTAINING PROTEIN FHOS - HOMO SAPIENS (HUMAN), 1164 aa.	Human Gene TREMBLNEW- ACC:BAA32101 BCAP - HOMO SAPIENS (HUMAN), 331 aa.	Human Gene TREMBLNEW- ACC:AAD42876 NY-REN-45 ANTIGEN - HOMO SAPIENS (HUMAN), 815 aa.	UNCLAS Human Gene Homologous to SIFIED SWISSPROT-ACC:O14732 MYO- INOSITOL-1(OR 4)- MONOPHOSPHATASE 2 (EC 3.1.3.25) (IMP 2) (INOSITOL MONOPHOSPHATASE 2) (MYO- INOSITOL MONOPHOSPHATASE A2) - Homo sapiens (Human), 288 aa.
UNCLAS	UNCLAS SIFIED	UNCLAS	UNCLAS	UNCLAS	UNCLAS
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Gly (1426)	Pro (1427)	Arg (1428)	Lys (1429)	Val (1430)	Ser (1431)
Gly	Pro	Ala	Lys	Val	Leu
gap	gap	dab.	<u> </u>	H	gap
G	ڻ ت	5	gap	gap	o
402 ACCGGAGAGTG GGCACCCCGTC CCA[G/gap]GGG CCATTTCTTCGA GGGAGCACCA	322 TCGAGGGTGAC CACAGCCCCAG AGG[G/gap]CCG CAGCACAGCGC	336 GCTCTACCTGG GCTACACCCCG CAG[G/gap]CGG CCCGTGAAGTG CGCATCATGCA	TTTGTTGAGATG CATGAATTTTTTT [gap/T]CTCTATTG CTGCTTGAAAAT	981 GCTCTCTTTT ATTGGTAACCAG T[gap/T]GGTGGC CACGAGTCATAC	861 AGATCTGTCTCC CCGGAGACCCG GA[G/gap]CCGCT GGCCATTGCAG AAGGCGCCC
402	322	336	501	186	861
1053 cg44004690	1054 cg43957283	1055 cg43329741	1056 cg44010310	1057 cg39729127	1058 cg43135797
1053	1054	1055	1056	1057	1058

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9.00E-148	9.00E-148	1.10E-140	4.90E-140	1.90E-138	2.20E-137	3.00E-131
Human Gene Homologous to SWISSPROT-ACC:Q60936 HYPOTHETICAL HEART PROTEIN - Mus musculus (Mouse), 298 aa (fragment).	Human Gene Homologous to SWISSPROT-ACC:Q60936 HYPOTHETICAL HEART PROTEIN - Mus musculus (Mouse), 298 aa (fragment).	Human Gene Homologous to SPTREMBL-ACC:Q99769 HYPOTHETICAL 26.4 KD PROTEIN - HOMO SAPIENS (HUMAN), 255 aa.	Human Gene Homologous to TREMBLNEW-ACC:BAA74897 KIAA0874 PROTEIN - HOMO SAPIENS (HUMAN), 601 aa (fragment).	Human Gene Homologous to SPTREMBL-ACC:093263 AVENA - GALLUS GALLUS (CHICKEN), 550 aa.	Human Gene Homologous to SPTREMBL-ACC:014777 RETINOBLASTOMA-ASSOCIATED PROTEIN HEC - HOMO SAPIENS (HUMAN), 642 aa.	Human Gene Homologous to SWISSPROT-ACC:043822 28.3 KD PROTEIN C210RF2 (C210RF- HUMF09G8.5) (YF5/A2) - Homo sapiens (Human), 256 aa.
UNCLAS	SIFIED	SIFIED	UNCLAS	SIFIED	UNCLAS SIFIED	SIFIED
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Ala (1432)	Ala (1433)	Arg (1434)	His (1435)	Lys (1436)	Lys (1437)	Cys (1438)
Gly	Gly	Arg	Ala	ujo J	Arg	Met
gap	gap	дар	gap	gap	gap	gap
O	O	ပ	o	O	ڻ ت	o l
1704 ATCACTGTTGAT GCTCTGGGCCA CG[C/gap]CAGG GTACTGGATCTT CATGGCCAC	TCACTGTTGATG CTCTGGGCCAC GC[C/gap]AGGGT ACTGGATCTTCA TGGCCACC	1100 AGGGCCACGGG GTGGGCCAGGG GGC[C/gap]GGG CCATTCCAGTG GCTCCTTGTC	126 TCTACCCAGCTA AATACACATTAT G[G/gap]CATTTA GCAAACTAACTT ACAAGTC	1073 GCAGGAACGCC TGGATCGGGAG AGG[C/gap]AAGA AAGACAAGAACG AGAGAGGCT	430 ATAACAGAAAGC AAGAGAAGTGTG A[G/gap]AACTCT GAAAGAAGAAGT TCAAAAG	411 TCACAGATATCT CCATTGCCAGG A(G/gap)ATGCCC AGCCTGGAGGT GATCACGC
1704	1705	1100	126	1073	430	411
1059 cg43965796	1060 cg43965796	1061 cg42907867	1062 cg43922710	1063 cg43303845	1064 cg43973762	1065 cg43918679
1059	1060	1061	1062	1063	1064	1065

						50
4.00E-129	3.70E-126	1.70E-120	1.70E-120	2.00E-118	2.00E-118	4.80E-110
Human Gene Homologous to TREMBLNEW-ACC:AAD39906 FH1/FH2 DOMAIN-CONTAINING PROTEIN FHOS - HOMO SAPIENS (HUMAN), 1164 aa.	Human Gene Homologous to TREMBLNEW-ACC:AAD29690 PUTATIVE ZINC FINGER TRANSCRIPTION FACTOR OVO1 - MUS MUSCULUS (MOUSE), 267 aa.	Human Gene Homologous to SWISSPROT-ACC:O35682 MYELOID UPREGULATED PROTEIN - Mus musculus (Mouse), 296 aa.	Human Gene Homologous to SWISSPROT-ACC:O35682 MYELOID UPREGULATED PROTEIN - Mus musculus (Mouse), 296 aa.	Human Gene Homologous to SPTREMBL-ACC:P70582 NUCLEOPORIN P54 - RATTUS NORVEGICUS (RAT), 510 aa.	Human Gene Homologous to SPTREMBL-ACC:P70582 NUCLEOPORIN P54 - RATTUS NORVEGICUS (RAT), 510 aa.	Human Gene Homologous to TREMBLNEW-ACC:AAD43195 PEROXISOMAL MEMBRANE PROTEIN PMP 24 - HOMO SAPIENS (HUMAN), 212 aa.
UNCLAS SIFIED	UNCLAS	SIFIED	SIFIED	UNCLAS	UNCLAS	UNCLAS
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Ser (1439)	Thr (1440)	Ala (1441)	Ser (1442)	Gin (1443)	Leu (1444)	Trp (1445)
<u>el</u>	Ser	Cys	Cys	Gin .	Thr	Leu
gap	gap	gap	gap	<u>ت</u>	gap	gap
o	<u>ن</u>	<u>o</u>	o .	gap	ď	ر ت
503 GCCGCTCCCTCT TCTCACTGAAGC A[G/gap]ATCTTC CAGGAGGACAA AGACCTGG	1014 ACTGTCACTTCC CTGCTGCAGGG CA[G/gap]CCCCC ACCTGTGAGTG GCTCGAGCC	516 CCCTGATCATCC G TCATCGTGGAGC T[G/gap]TGCGGG CTCCAGGCCCG	518 CTGATCATCCTC ATCGTGGAGCT GT[G/gap]CGGGC TCCAGGCCCGC TTCCCCTG	327 GATTTAATACAC AGCAGCAGCAG CAlgap/GJAACTA CATTAGGTGGTC TCTTCAGT	329 ATTTAATACACA GCAGCAGCAGC AA(A/gap)CTACA TTAGGTGGTCTC TTCAGTCA	979 AGGATACCCCC GAGGAAGGCCG CCA[G/gap]GAAT GCGTGTGCTGG GTAGGTCTTG
503	1014	516	518	327	329	979
1066 cg38059286	1067 cg42549778	1068 cg44921277	1069 cg44921277	1070 cg42530218	1071 cg42530218	1072 cg43325007
1066	1067	1068	1069	1070	1071	1072

	io.		T	Iα	
				12	
4.50E-105	3.30E-102	1.00E-90	4.50E-89	1.00E-82	1.90E-81
Human Gene Homologous to SPTREMBL-ACC:Q91579 ABONUCLEOPROTEIN - XENOPUS LAEVIS,(AFRICAN CLAWED FROG), 462 aa.	Human Gene Homologous to TREMBLNEW-ACC:CAB43382 HYPOTHETICAL 146.2 KD PROTEIN - HOMO SAPIENS (HUMAN), 1296 aa.	UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:015194 HYA22 - HOMOSAPIENS (HUMAN), 340 aa.	Human Gene Similar to SPTREMBL-ACC:000581 HYPOTHETICAL 20.5 KD PROTEIN - HOMO SAPIENS (HUMAN), 176 aa.	Human Gene Similar to SPTREMBL-ACC:088719 CMP-N-ACETYLNEURAMINIC ACID SYNTHETASE (EC 2.7.7.43) (ACYLNEURAMINATE CYTIDYLYLTRANSFERASE) (CMP-SIALATE PYROPHOSPHORYLASE) (CMP-SIALATE SYNTHASE) - MUSCULUS (MOUSE), 432 aa.	Human Gene Similar to TREMBLNEW-ACC:BAA76495 TYPE II MEMBRANE PROTEIN SIMILAR TO CD69 - HOMO SAPIENS (HUMAN), 149 aa.
UNCLAS	SIFIED	SIFIED	SIFIED	SIFIED	UNCLAS
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
End (1446)	Asp (1447)	Thr (1448)	Pro (1449)	(1450)	Thr (1451)
Leu	Ala	Asn	Ala	<u>=</u>	Tyr
gap	gap	O	gap	gap	gap ·
O	<u>ن</u>	gap	 -	∢	∢
776 GGCCTACGGCG CCTACGCTCAG GCA[C/gap]TGAT GCAGCAGCAAG CGGCCCTGAT	AGGTGGCCCTC ACACCCAGTGCT GT[G/gap]CTGCG CGGAGGGCTGT ACTGAAGGT	778 CTGCGGCGGGT GCTCATCCTGGA CAlgap/CJATTCA CCTGCCTCCTAT GTCTTCCA	812 TTAAATATAGAC AAGTGGACCATT T[T/gap]GCCTCA AATTCACAGGAG CCAGCAT	832 GTGGCCATTGGT GAGACATCCATC A[A/gap]TATTGC AAACCAAAAGTT TTATTTC	447 TCGGCATGTTGA GTGGAACAGTTG T[A/gap]TTTACTT GAATTCCAATCT CCTTCT
776	166	778	812	832	447
1073 cg43981269	1074 cg43250166	1075 cg43982164	1076 cg43980889	1077 cg43970119	1078 cg44030987
1073	1074	1075	1076	1077	1078

				17	22
6.60E-81	2.10E-77	8.00E-76	7.20E-75	2.00E-71	1.30E-67
9.60	2.10	8.00	7.20	2.00	1.30
UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:CAB45773 HYPOTHETICAL 18.0 KD PROTEIN - HOMO SAPIENS (HUMAN), 162 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:CAB39700 CONSERVED HYPOTHETICAL PROTEIN - STREPTOMYCES COELICOLOR, 384 aa.	UNCLAS Human Gene Similar to SWISSNEW-SIFIED ACC:P50606 MAGO NASHI PROTEIN HOMOLOG - Homo sapiens (Human), and Mus musculus (Mouse), 146 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB40855 PUTATIVE ADENINE GLYCOSYLASE - STREPTOMYCES COELICOLOR, 308 aa.	Human Gene Similar to SPTREMBL-ACC:Q23382 ZK1058.4 -CAENORHABDITIS ELEGANS, 442 aa.	Human Gene Similar to TREMBLNEW- ACC:AAD37863 PUTATIVE NADH OXIDOREDUCTASE COMPLEX I SUBUNIT - CAENORHABDITIS ELEGANS, 237 aa.
UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS	UNCLAS SIFIED
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Ser (1452)	Ser (1453)	Ser (1454)	Ser (1455)	End (1456)	Thr (1457)
n B	Phe	<u>G</u> lu	g _n	olo Glu	Thr
gap	gap	gap	gap	⋖	gap
O	O	g	ر ن	gap	O
665 GGTGGCTCAGG GGCTGGGGGAG GCT[C/gap]CCCT GGGGCTTCAGA CAGCACATAG	366 AAGGCACCATCA AGTCGGCGGTG GC[C/gap]TTCGG GCATCTCCTTGC CGAGGGTA	371 CTCCTCCTGACC GAGTGGGCCGG CA[G/gap]GAGCT TGAATCGTCAT TGGAGATG	670 CACTGGTATGCA CGGCGCGGTCT CC[G/gap]CAGTG TGAGGTCTGCC CGATCCGGG	2953 CTCCCTCCTGG GTATCTGCATCT TC[gap/A]AAAAT CTCCTTCTTGGT TTTCATCC	806 GGACACAGGCT GCGGTGTAAGC CCG[C/gap]GTCA CCGCCGGCACC TGCAGGAACT
665	366	371	029	2953	908
1079 cg43320682	1080 cg25255686	1081 cg43988975	1082 cg39523553	1083 cg43951096	1084 cg42831353
1079	1080	1081	1082	1083	1084

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5.80E-66	4.60E-64	5.10E-62	1.50E-60	1.70E-59	1.70E-59
			1.5	1.7	1.7
Human Gene Similar to SWISSNEW-ACC:043182 RHO-GTPASE-ACTIVATING PROTEIN 6 (RHO-TYPE GTPASE-ACTIVATING PROTEIN RHOGAPX-1) - Homo sapiens (Human), 587 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD34105 CGI-110 PROTEIN -HOMO SAPIENS (HUMAN), 125 aa.	Human Gene Similar to SWISSPROT-ACC:Q04205 TENSIN - Gallus gallus (Chicken), 1744 aa.	Human Gene Similar to SPTREMBL-ACC:Q19498 SIMILAR TO MELIBIOSE CARRIER PROTEIN -CAENORHABDITIS ELEGANS, 501 aa.	Human Gene Similar to SPTREMBL-ACC:033196 HYPOTHETICAL 32.9 KD PROTEIN - MYCOBACTERIUM TUBERCULOSIS, 307 aa.	Human Gene Similar to SPTREMBL-ACC:033196 HYPOTHETICAL 32.9 KD PROTEIN - MYCOBACTERIUM TUBERCULOSIS, 307 aa.
UNCLAS	SIFIED	UNCLAS	UNCLAS	UNCLAS SIFIED .	UNCLAS
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
Ser (1458)	lle (1459)	Ala (1460)	Cys (1461)	Gly (1462)	Ala (1463)
Leu	Asp	Ala	ne	Ala	Arg
gap	gap	gap	gap	gap	gap
o	_ග	O	ပ	O	V
688 AATACTCCGTGC AGCGAGTGCGT CA[G/gap]CTCCG TGAAGAATTTGA TCAAGGTC	CAAAATCACAGC TGAAGAAATGTA T[G/gap]ATATATT TGGGAAATATGG ACCTAT	928 CCTGGGGGCTCA CCAAGGCAACCT GG[C/gap]CTCCG GTCTTCATAGCA ATGCAATA	713 GGAGGAGCCAG GCGAGCACACC CCC[C/gap]TGTT GGCCCCTGCCA	499 CGGCGGCGCAT GCTCGACGTTCT GG[C/gap]GTCTG TCGACGAGTTGC CGGTGCAA	524 CGTCTGTCGAC GAGTTGCCGGT GCA[A/gap]CGCT GGAGCTGCGAC GGGATCCTGG
889	315	928	713	499	524
.1085 cg44938009	1086 cg43054992	1087 cg39516123	1088 cg43983590	1089 cg44128084	1090 cg44128084
1085	1086	1087	1088	1089	1090

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= .				6 (6q14)
3.50E-59	4.10E-56	1.5E-51	1.3E-50	9.1e-313
FRAMESHIFT UNCLAS Human Gene Similar to SPTREMBL-SIFIED ACC:035946 HYPOTHETICAL 14.9 KD PROTEIN - RATTUS NORVEGICUS (RAT), 137 aa.	UNCLAS Human Gene Similar to SWISSPROT. SIFIED ACC:Q60870 POLYPOSIS LOCUS PROTEIN 1 HOMOLOG (TB2 PROTEIN HOMOLOG) (GP106) - Mus	UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:BAA74896 KIAA0873 PROTEIN - HOMO SAPIENS (HUMAN), 466 aa (fragment).	FRAMESHIFT UNCLAS Human Gene Similar to TREMBLNEW-SIFIED ACC:CAB42016 PUTATIVE ADENYLOSUCCINATE SYNTHETASE - STREPTOMYCES COELICOLOR, 427 aa.	UNCLAS Human Gene SWISSPROT- SIFIED ACC:P21589 5'-NUCLEOTIDASE PRECURSOR (EC 3.1.3.5) (ECTO- NUCLEOTIDASE) (5'-NT) (CD73 ANTIGEN) - Homo sapiens (Human), 574 aa.
UNCLAS	UNCLAS	UNCLAS SIFIED	UNCLAS SIFIED	UNCLAS SIFIED
FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT	FRAMESHIFT
(1464)	Gly (1465)	Leu (1466)	Ala (1467)	Ala (1468)
Gly	Gly	Геп	Gly	Sy
gap	gap	gap	gap	gap
<u>o</u> .	U	<u>ن</u>	U	F
931 GGCCCTGTGCTTC GGAGCCGTGGG CT[C/gap]CGTAG CCCGAGTGATAA GCCATGGC	385 TTCCGGCCGCC GCGTCCAGGGC TCG[C/gap]CCGC TGAGGTCGTTCA TGACCCCGC	184 AGATAGCTGAGA ATATTCTGCGCA A[G/gap]CCTCAC AGCTTGTTCCT GGCAGCC	497 ATGAGATCGACG C CCTTGCGCGGC CG[C/gap]GGCGT AGACATTCCGCA CCCGCTCA	1181 CTCTCAATCATG CCGCTTTAGAGA A[T/gap]GCAACA TGGGCAACCTG ATTTGTGA
931	385	184	497	1181
1091 cg43976473	1092 cg40309770	1093 cg42725664	1094 cg39380052	1095 cg44928804
1091	1092	1093	1094	1095